

# Technical Report

GP-2 Methane Monitoring Summary and Assessment  
South Dayton Dump and Landfill Site  
Moraine, Ohio

**GHD** | 651 Colby Drive Waterloo Ontario N2V 1C2  
038443 | 202 | Report No 32 | December 12 2016



## Executive Summary

Elevated methane levels have been recorded at the GP-2 nested probe in hotter summer months (returning to zero in cooler months), while nearby soil gas probes on the west side of Dryden Road adjacent to the South Dayton Site generally do not have any detectable levels of methane. All available information indicates that the methane and other gases detected at GP-2 result from the DP&L operations and property conditions. Moreover, there is no indication that the soil gas conditions at GP-2 are related to the South Dayton Site. This is supported by the following lines of evidence:

1. Methane has been consistently detected at GP-2 nested probes during the period of July 21 through October 12, 2016. Furthermore, elevated levels of methane in excess of 100 percent of the lower explosive limit (LEL) have been detected at GP-2 yearly since its installation (June 27 to October 17, 2013, July 17 to September 4, 2014), except in 2015<sup>1</sup>. Since 2013, multiple soil gas probes located on the South Dayton Site on the opposite (west) side of Dryden Road have been monitored and methane was not detected with two minor exceptions; both times the Site methane levels were significantly less than the GP-2 levels. The monitoring data clearly demonstrates a concentration gradient condition with high values at GP-2 and essentially non-detect values elsewhere. This is indicative of a local source condition in close proximity to GP-2.
2. Physical conditions at the South Dayton Site do not support lateral movement of subsurface soil gas within preferential pathways. Stratigraphic logs identify the presence of predominantly coarse grained native soil. Flow of soil gas preferentially along buried utility bedding would only occur where the utility bedding has significantly greater permeability compared to the surrounding soil and a pressure differential exists to force soil gas movement; neither condition exists to support preferential flow. Little or no methane was detected in measurements within buried utilities nearby GP-2.
3. Analytical results for samples collected from GP-2 nested gas probes on August 19, 2016 confirmed the presence of methane and volatile organic compounds (VOCs) related to petroleum products. GP-2 is situated within an area of groundwater impacted by petroleum substances that results from a release from former underground storage tanks (USTs) at the DP&L Transportation Center. The release has been documented in files available through BUSTR which indicate that petroleum-impacted soil was left in place following removal of USTs and residual impacts in groundwater have persisted for many years and continue to exist.
4. Although potential methane sources present at the South Dayton Site relate to historic waste disposal within certain portions of the Site and USTs formerly located at various Dryden Road businesses, previous investigations have determined that these sources do not generate significant amounts of methane that migrate off-Site across the Dryden Road Site boundary.

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<sup>1</sup> Respondents completed semi-annual methane monitoring at GP-2 in 2015 in accordance with Addendum 2 of the VI Mitigation Work Plan.





Soil gas monitoring demonstrates that methane concentrations at the South Dayton Site boundary are very low or not detected.



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# 1. Introduction

This report presents a consolidated summary of information related to the methane detections at the soil gas probe location identified as GP-2. The GP-2 location includes two nested probes screened at 12 feet and 16 feet (ft) below ground surface, situated on the east side of Dryden Road, in the right-of-way adjacent to the Dayton Power & Light (DP&L) Company Transportation Center at 1900 Dryden Road in Moraine, Ohio (DP&L property) (shown on Figure 1). The South Dayton Dump and Landfill Site (Site) is located on the west side of Dryden Road, at 1901 through 2153 Dryden Road (sometimes called Springboro Pike) and 2225 East River Road in Moraine, Ohio.

GHD (formerly Conestoga-Rovers & Associates, CRA) has prepared this summary on behalf of the Respondents to the Administrative Settlement Agreement and Order on Consent for Removal Action (ASAOC or Removal Order) with the USEPA, Docket No. V-W-13-C010 (Respondents). This summary is based on GHD's comprehensive review of all relevant, available sources of information, including, but not limited to, field measurements and observations that have been collected regularly since 2012, previous investigation results, Ohio's Bureau of Underground Storage Tank Regulations (BUSTR) file information, Ohio Utilities Protection Services (OUPS) member records, and stratigraphy logs of investigative locations.

## 1.1 Report Organization

The information presented in this report is organized to summarize relevant historic information related to soil gas sampling and analytical results in Section 2. The evaluation of the supporting information for the lines of evidence is presented in Section 3 and includes the following:

1. On-site geology
2. Methane readings for on-Site soil gas probes compared to off-Site (GP-2) values, including seasonal trends
3. Landfill gas (LFG) conditions at the Site
4. Potential sources of methane from DP&L property
5. Utility corridor information and potential preferential pathways

# 2. History of South Dayton Dump and Landfill Site Soil Gas Investigation

## 2.1 Soil Gas Probe Installations

In 2009 GHD installed 21 LFG/soil gas probes at the South Dayton Dump and Landfill Site in the following areas:

- The central portion of the Site in areas of suspected municipal waste disposal;



- On or adjacent to the Site boundary; and
- In the vicinity of the commercial properties along the west side of Dryden Road and East River Road, and on Valley Asphalt property.

GHD installed the probes to evaluate the presence of methane and non-methane organic compounds (NMOC) and assess LFG and soil gas quality in the screened intervals of the soil gas probes.

In 2012 USEPA START contractor Dynamac Corporation installed six nested soil gas probes along Dryden Road, and one nested soil gas probe along East River Road. Five of the probes were installed along the Site boundary on the west side of Dryden and East River Roads (GP-1, GP-3, GP-4, GP-6, and GP-7), and two of the probes were installed on the east side of Dryden Road (GP-2 and GP-5) adjacent to the DP&L property boundary. Stratigraphy logs for the USEPA soil gas probes are not available.

In 2013 GHD installed three additional soil gas probes, including one nested soil gas probe, along the Dryden Road Site boundary. The purpose of the additional soil gas probes was to address gaps in the soil gas probe network, in particular, along the Dryden Road Site boundary across from GP-2. Following the installation of the additional probes, a soil gas data point (i.e., either a soil gas probe or sub-slab soil vapor probe) was present every 200 feet along the Site property line where off Site migration of methane may occur.

In general, the Site area soil gas probes are constructed with screen intervals at various depths which effectively monitor both the fill material and the underlying or surrounding native soil in the unsaturated zone, additional details are presented in Section 3.1.

Figure 1 presents the locations of the 24 GHD and 7 USEPA soil gas probes and the locations of Site buildings containing sub-slab soil vapor probes.

## **2.2 Summary of Soil Gas Probe Monitoring and Results**

Since 2009 Respondents have installed an extensive and comprehensive soil gas probe network at the South Dayton Dump Site to evaluate the presence of methane and NMOC and monitor site boundaries where off-Site migration of methane may occur. Since its installation in 2012 Respondents have collected and compiled four years of methane and VOC screening readings from GP-2 and Site area soil gas probes.

GHD uses a LandTec GEM<sup>TM</sup> 2000 instrument or equivalent to measure field methane values and a RAE<sup>TM</sup> photo-ionization detector (PID) to screen for the presence of VOCs. GHD measures filtered and unfiltered combustible gases with the LandTec GEM<sup>TM</sup> 2000; the filtered measurements are collected using a charcoal carbon filter that filters non-methane organic compounds (NMOC) and measure true methane values.

### **2.2.1 GP-2 Monitoring Results**

In 2012 at GP-2 (12-foot and 16-foot depths), USEPA measured methane levels ranging from 2.5 to 24.1 percent and 0 percent methane at all other USEPA-installed soil gas probes. The methane concentrations measured by USEPA declined over time. The Respondents measured methane



levels at GP-2 beginning October 31, 2012, which continues in accordance with the sampling plan frequency specified in Addendum 2 of the Vapor Intrusion (VI) Mitigation Work Plan (GHD, December 2015).

The methane monitoring at GP-2 has produced an extensive amount of data, comprising over 88 individual monitoring events since 2012. Following the installation of the additional Site area soil gas probes in 2013 and in accordance with Addendum 2 of the VI Mitigation Work Plan, supplemental monitoring at the Site area soil gas probes demonstrates that the methane at GP-2 is isolated as mentioned above and discussed in more detail in Section 3.2 below. The methane values at GP-2 measured by Respondents are presented in Table 1. Also shown in Table 1 are groundwater levels from monitoring wells. The locations of the monitoring wells are shown on Figure 2.

On August 19, 2016, GHD collected 6-liter Summa<sup>TM</sup> canister samples from GP-2 at 12-ft and 16-ft intervals, and submitted the samples to TestAmerica Laboratories Inc. for analysis using USEPA Method TO-15 for VOCs and ASTM Method D1946 for methane analyses. The laboratory analytical results confirm the presence of methane at GP-2; the methane laboratory result closely matched the filtered methane field readings measured using a LandTec GEM<sup>TM</sup> 2000 meter and charcoal filter. Petroleum hydrocarbon compounds were also present in the laboratory analytical samples, including one or more of the following: 2,2,4-Trimethylpentane; butane; cyclohexane; heptane; and hexane. The GP-2 analytical results are included in Table 2.

### **2.2.2 Notification of Elevated Methane Levels**

On August 16, 2016, GHD submitted electronic mail (email) notification of elevated methane levels adjacent to DP&L property to representatives of DP&L and the City of Moraine, with a copy to the agencies. GHD received acknowledgement of the submission from DP&L; however, no response was received from the City of Moraine.

GHD provided updates of GP-2 methane levels to DP&L representatives via e-mail on September 9, 20, and 30, 2016, and October 14, 2016, with copy to the agencies. Copies of the notification submissions are provided in Attachment A<sup>2</sup>.

## **3. Evaluation of Lines of Evidence**

### **3.1 On-Site Geology**

The geology of the Dayton area is summarized in Section 3.1 of the Remedial Investigation Report Operable Unit 1 (OU1) (CRA, 2010).

The subsurface stratigraphy in the vicinity of the Site is consistent with the regional geology of the Miami Valley Aquifer with the exception that the Till Rich Zone is highly discontinuous beneath the Site. The soil stratigraphy is summarized below and is shown in selected cross-sections<sup>3</sup> in

<sup>2</sup> Attachments to the notifications are the same as Table 1 and are therefore, not included in Attachment A.

<sup>3</sup> Selected cross-sections from Proposed Monitoring Well and Vertical Aquifer Sampling Locations Phase 1B and 2A (Proposal), CRA, January 2014.



Attachment B and described in the stratigraphy logs included in Attachment 3 of Attachment C and Attachment D:

1. Fill is composed of medium to coarse sand and fine gravel, with silty sand and trace silty clay intervals. In the vicinity of the DP&L monitoring wells, black cinders, foundry sand, and fly ash are also present within the Fill layer. The thickness of fill on the west side of Dryden Road varies from 8 to 20 feet. The thickness of fill on the east side of Dryden Road in the vicinity of GP-2 varies from 2 to 16 feet.
2. Native soil is composed of medium to coarse sand and/or fine gravel with cobbles or rock fragments.
3. Discontinuous fine-grained till facies are present beneath the Site and DP&L property, at an approximate depth of 40 feet below ground surface.

The soil stratigraphy generally consists of medium to coarse grained sand and fine gravel in both fill as well as native material. This coarse-grained nature of the stratigraphy means that the soil at both the Site and DP&L property is highly permeable, and is not conducive to the development of preferential pathways for soil gas movement.

The Site area soil gas probes that are monitored in conjunction with GP-2 are nested soil gas probe GP-7 (8, 12, and 16-foot depths), GP12-09 (6'), GP22-13 (20'), GP23-13 (18.5'), GP24A-13 (20'), and GP24B-13 (4.5'). These soil gas probes are screened in both fill and native material at various locations.

In summary, the coarse nature of the soil stratigraphy of the Site and DP&L property eliminates the possibility of any preferential pathways from the South Dayton Dump and Landfill Site to the DP&L property, and the numerous Site area soil gas probes screened at various intervals in both fill and native material are well situated to detect methane that may be migrating off-Site.

### **3.2 Monitoring Results**

Elevated methane levels at GP-2 are greater than the LEL of 5 percent during hot summer months. More particularly, the methane levels are greater at the deeper GP-2 (16-ft) depth than the shallower GP-2 (12-ft) depth (see Table 1 and Figures 3a and 3b).

The nested GP-2 soil gas probe is screened at 12 and 16 feet which is within the depth range of a DP&L UST excavation (27 feet in depth); as noted in Section 3.4 below. DP&L discontinued the excavation to the west of the Transportation Center due to the presence of a storm sewer and terminated the depth of the excavation when groundwater was encountered.

Based on the four-years of GP-2 data collected to date, the elevated levels of methane occur seasonally in warmer weather; are greater at the deeper screened interval depth of 16 ft; and are reflected in elevated PID readings. GHD monitors groundwater levels in monitoring wells in the vicinity of GP-2; there does not appear to be any correlation between groundwater levels and methane; the elevated levels of methane are correlated to temperature. The methane values at GP-2 and nearby groundwater levels measured by the Respondents are presented in Table 1.

The corresponding methane levels at South Dayton Site area soil gas probes have been non-detect throughout the years of monitoring, with two exceptions. Methane monitoring of GP23-13(18.5') on



August 29, 2016, and GP22-13(20') on October 12, 2016 indicated detectable levels of methane that were less than the LEL (3.4 percent and 0.1 percent unfiltered, respectively). The unfiltered GP-2(16') methane levels on August 29, 2016 and October 12, 2016 were 15.7 and 10.2 percent methane, respectively. The methane values at Site area soil gas probes are presented in Table 3. A comparison of non-detectable methane levels at South Dayton Site soil gas probes to GP-2 demonstrates that the GP-2 methane levels do not originate from the South Dayton Site.

### 3.3 LFG Conditions

Previous investigations have determined that potential LFG production at the South Dayton Site is relatively low and in a declining state since the Site has not accepted waste in 20 years and has reportedly not accepted putrescible waste since 1955 (Loney, 2014). Under these conditions the potential for a source condition and pressure gradient that would force lateral soil gas migration is insignificant. This is supported by soil gas pressure readings measured during RI field work in 2009 which show generally negative or zero (equilibrium) values<sup>4</sup> (see Table 4). These negative or zero pressure values indicate that the South Dayton Dump and Landfill is not pressurized and gas is not building up in the landfill. The 2009 pressure readings indicate that the positive pressure required to cause off-Site migration of methane in soil gas does not exist at the South Dayton Dump and Landfill Site.

### 3.4 DP&L Property

GP-2 is located adjacent to the DP&L property; approximately 150 feet west of DP&L's Transportation Center (see Figure 1). Numerous underground storage tanks (USTs) were previously located around the DP&L Transportation Centre. At least 11 USTs have been removed since the mid-1980s from the DP&L Transportation Centre. The former USTs contained antifreeze, hoist oil, gasoline, kerosene, No. 1 oil, No. 3 oil, and used oil, and are shown on Figure 2.

GHD obtained BUSTR files for the DP&L property at 1900 Dryden Road through a public information request. BUSTR incident number 579286-00 relates to the removal of two 10,000 gallon gasoline USTs from the DP&L Transportation Center in 1989. DP&L excavated an area approximately 35 ft (east-west) x 50 ft (north-south) x 27 ft (depth) in an effort to remove residual petroleum hydrocarbon (PHC) contamination. Excavation was limited to the west by the presence of a storm sewer, limited to the east by the Transportation Center building footer, and terminated at a depth of 27 ft when groundwater was encountered (Hunter/Keck, 1989). PHCs and other constituents of petroleum fuels may form methane via biodegradation under anaerobic conditions, as noted in the *Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites* (USEPA, June 2015). As of March 2015 DP&L was still conducting corrective actions to address petroleum hydrocarbon contamination from these two gasoline USTs. From 1995 to 1998, DP&L operated a groundwater (GW) remediation system that consisted of groundwater removal with air stripping. In 2004, DP&L commenced operation of an in-situ bioremediation system consisting of PVC air lines trenched to converted monitoring wells to stimulate petroleum-digesting bacteria through the injection of nutrients and oxygen. GHD understands that the bioremediation

<sup>4</sup> Slight positive pressures of 0.2 inches H<sub>2</sub>O were measured on one occasion at soil gas probes GP17-09 and GP19-09, both at the northernmost portion of the Site.





system may not have continued operation after 2005 due to elevated levels of petroleum contamination and BUSTR's subsequent requirement for a Tier 1 Source Investigation.

Based on GHD's review of the BUSTR files, DP&L did not complete any monitoring for methane or explosive gases, nor any soil gas/vapor intrusion investigations. Following the discontinuation of the GW remediation system, DP&L sampled monitoring wells for benzene, toluene, ethylbenzene, and xylenes (BTEX). The monitoring plan in the Bioremediation Remedial Action Plan (LJB, Inc., August 2002) specified the following parameters: dissolved oxygen (DO), total organic carbon (TOC), total suspended solids (TSS), pH, dissolved iron, ammonia, orthophosphates and BTEX. The existence of PHC contamination associated with the former USTs at the DP&L Transportation Center represents a potential source of methane and petroleum substances in soil gas. The TO-15 analytical results for samples collected from GP-2 soil gas probes on August 19, 2016 confirm the presence of both methane and other petroleum substances.

### **3.5 Utility Corridor Information and Potential Preferential Pathways**

In order to further assess potential pathways for subsurface soil gas migration GHD collected information regarding the existence of buried utilities (see Attachment C). This identified the presence of multiple buried utilities on the west side of Dryden Road including storm and sanitary sewers, water and natural gas mains. The presence of telecommunications buried infrastructure is also indicated beneath and adjacent to Dryden Road. The only buried utilities identified in the vicinity of GP-2 are storm drains, Cincinnati Bell, and a telecommunications manhole. The storm drains appear to connect to the storm sewer on the west side of Dryden Road.

USEPA's 2015 VI Guidance<sup>5</sup> states that vapors "can migrate via advection (and diffusion) along a preferential subsurface pathway, such as a utility corridor or more porous zone of soil or rock, or beneath surface barriers that limit the direction(s) of vapor migration, such as frozen ground or asphalt". As stated in Section 3.1, the coarse grained soil conditions do not support the formation of preferential pathways for soil gas movement. Moreover, it is unlikely that the buried utilities are surrounded by backfill material that is more permeable than adjacent soil. Trenching techniques used for utility installation require the use of well-graded compacted material as backfill for engineering purposes (to avoid formation of voids and prevent settlement). The use of excavated spoil material for covering buried utilities is also common. Hence, it is unlikely that preferential pathways associated with buried utilities exist in the vicinity of GP-2.

In order to further assess potential subsurface methane migration GHD conducted monitoring for methane and other gases within the storm sewer system and telecommunications manhole near GP-2 on three dates. On September 28, 2016, GHD completed visual inspections and gas monitoring of underground utilities located in the area of GP-2 including storm water inlets 1 through 6 (S.I. 1, S.I. 2, S.I. 3, S.I. 4, S.I. 5, and S.I. 6), manholes 7 through 10 (M.H. 7, M.H. 8, M.H. 9, and M.H. 10), and sanitary manhole 1 (S.M.H. 1) (refer to Figure 2). Methane was not detected at storm water inlets and manholes monitored on September 28, 2016. An LEL of 1 percent was recorded at

<sup>5</sup> OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, June 2015, USEPA Office of Solid Waste and Emergency Response.



S.M.H. 1. The monitoring conducted on October 7 and 12 confirm the September 28 results; no detectable levels of methane or LEL were measured at S.M.H. 1 on October 7, 2016.

In summary, methane was not detected in any of these buried structures (except in the sanitary manhole at 1 percent of the LEL on September 28, 2016) although elevated methane was detected at GP-2 on each of the same dates (i.e., September 28, October 7 and 12, 2016). This demonstrates that although methane is found at GP-2 there is no indication of methane within the nearby buried utilities and, hence, no reason to conclude that buried utilities are being affected by subsurface methane migration from surrounding soil.

## **4. Summary**

As stated in the preceding discussion, elevated methane levels have been recorded at the GP-2 nested probe in hotter summer months, while nearby soil gas probes on the west side of Dryden Road adjacent to the South Dayton Site do not have any detectable levels of methane, except for two instances and the results were below the LEL. All available information indicates that the methane and other gases detected at GP-2 result from the DP&L operations and property conditions. Moreover, there is no indication that the soil gas conditions at GP-2 are related to the South Dayton Site. This assessment is supported by multiple lines of evidence as explained above.

Since 2009, Respondents have installed an extensive and comprehensive soil gas probe network at the South Dayton Dump Site to evaluate the presence of methane and NMOC, and to monitor Site boundaries where off Site migration of methane may occur.

In 2012 USEPA installed six nested soil gas probes along Dryden Road. USEPA measured potentially explosive levels of methane at nested soil gas probe GP-2. GP-2 is located on the east side of Dryden Road, adjacent to the DP&L Transportation Centre. At least 11 USTs have been removed since the mid-1980s from the DP&L Transportation Centre; the former USTs contained antifreeze, hoist oil, gasoline, kerosene, No. 1 oil, No. 3 oil, and used oil. USEPA guidance notes that methane can form through the anaerobic biodegradation of antifreeze, petroleum hydrocarbons, and constituents of petroleum fuel. It is the Respondents' understanding that DP&L has undertaken corrective actions for over 25 years related to the removal of two 10,000 gallon gasoline USTs in 1989, BUSTR incident number 579286-00. Based on a review of BUSTR files, DP&L has not completed any methane or explosive gas investigations or monitoring during the BUSTR-related investigations and corrective actions; DP&L's investigations have been limited to petroleum hydrocarbon contamination.

From November 2012 to present, Respondents have completed routine methane monitoring at GP-2 and corresponding site area gas probes. Based on the four years of methane data collected to date, it is evident that elevated levels of methane at GP-2 occur seasonally in warmer weather, with the greatest levels measured at the deeper GP-2 (16') probe. However, the corresponding methane levels at South Dayton Site area soil gas probes have been non-detect throughout the years of monitoring, with two exceptions. For both instances, the methane values at GP-2 were significantly greater than the methane values at the Site area soil gas probes. Additionally, the Site area soil gas probes are screened in both fill and native material and are well situated to detect methane that may be migrating off-Site.



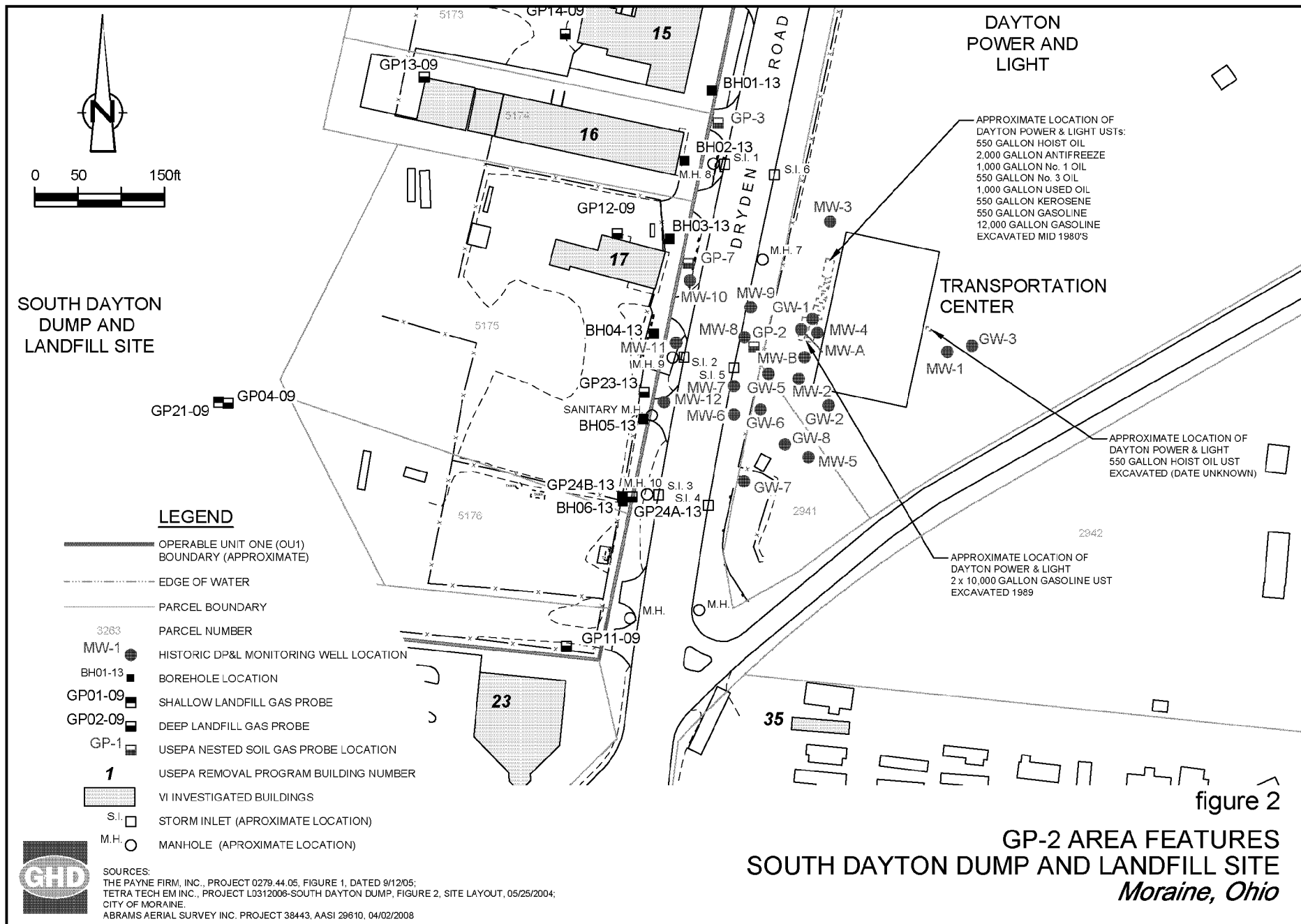
GHD reviewed stratigraphy logs and determined that coarse, permeable material is present in fill and native material, which is not conducive to the formation of preferential pathways. Additionally, underground utility information and methane readings from storm sewer inlets and manholes do not indicate the existence of any preferential pathways from the South Dayton Dump and Landfill Site to the GP-2 soil gas probe.

Based on the evidence presented in this report, the South Dayton Dump and Landfill Site is not the source of the potentially explosive levels of methane measured at GP-2. As a result, the Respondents request USEPA review and approve Revision 1 to Addendum 2 – VI Mitigation Work Plan (see Attachment E).

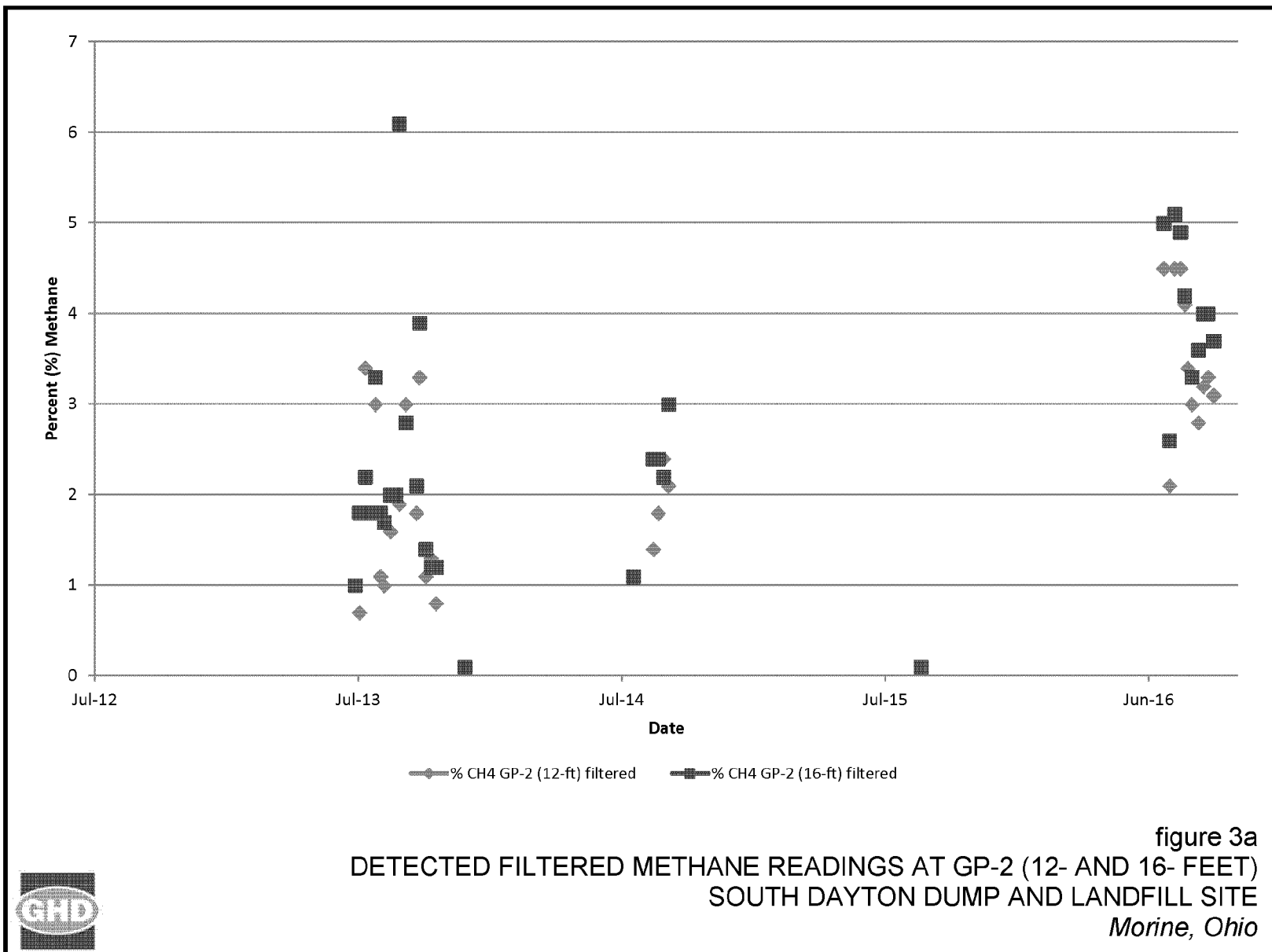
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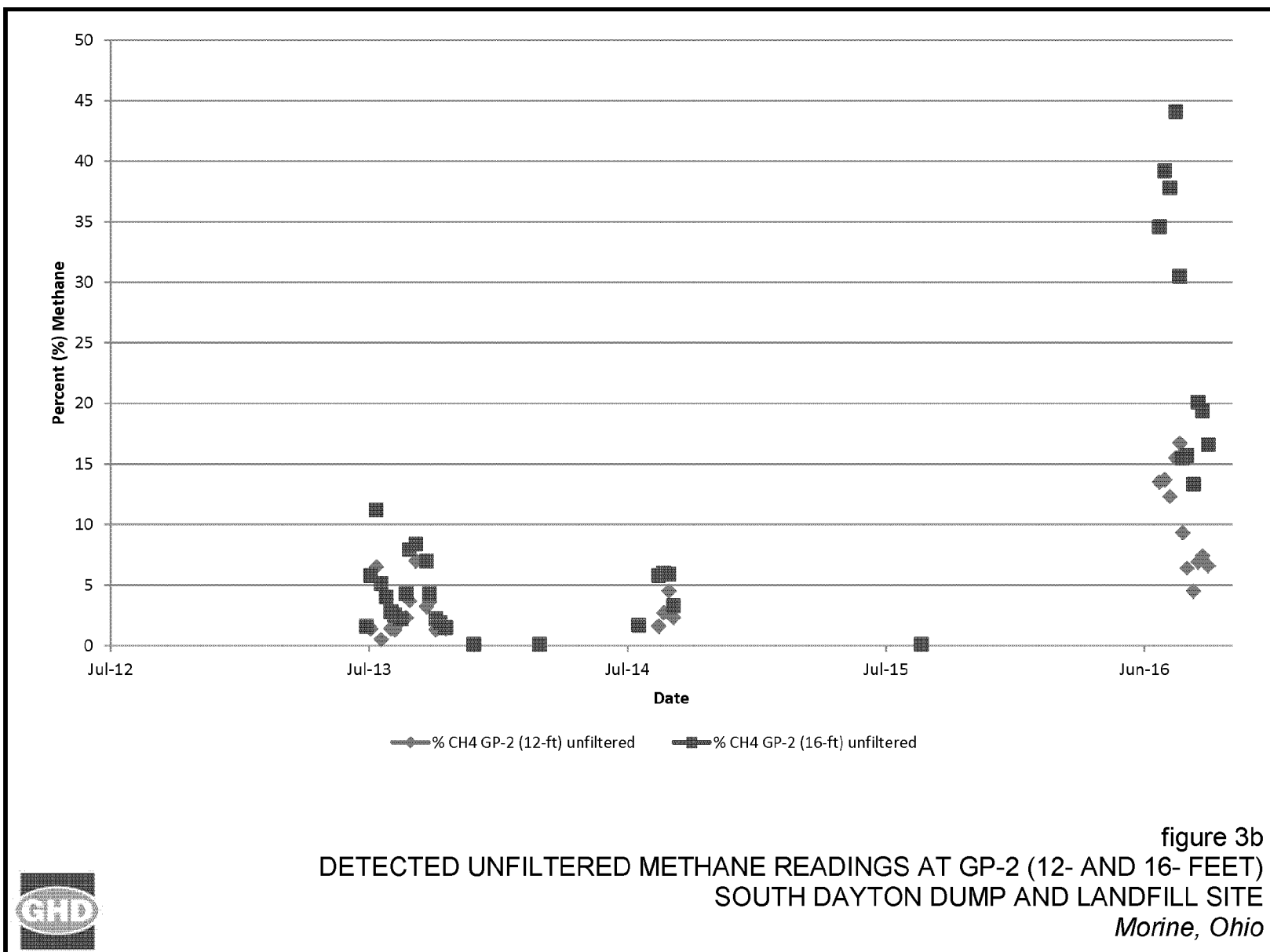


Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	11/9/2012	13:54	--	4.1	10.6	0.0	0	30s - 40s	none		
GP-2 (12') with filter		--	--	5.6	9.1	0.0	0				
GP-2 (16') without filter		--	--	2.0	11.6	0.0	0				
GP-2 (16') with filter		--	--	4.6	10.0	0.0	0				
GP-2 (12') without filter	11/15/2012	15:04	0.0	2.4	10.8	0.0	0	30s - 40s	none		
GP-2 (12') with filter		--	0.0	2.3	10.3	0.0	0				
GP-2 (16') without filter		15:09	0.0	1.0	11.8	0.0	0				
GP-2 (16') with filter		--	0.0	0.9	11.4	0.0	0				
GP-2 (12') without filter	11/20/2012	14:35	0.0	2.2	11.3	0.0	0	50s	Trace		
GP-2 (12') with filter		--	0.0	2.1	11.0	0.0	0				
GP-2 (16') without filter		14:40	0.0	0.9	12.1	0.0	0				
GP-2 (16') with filter		--	0.0	0.8	11.9	0.0	0				
GP-2 (12') without filter	11/29/2012	13:53	0.0	4.3	11.0	0.0	0	40s - 50s	none		
GP-2 (12') with filter		--	0.0	4.7	11.2	0.0	0				
GP-2 (16') without filter		13:58	0.0	2.1	12.1	0.0	0				
GP-2 (16') with filter		13:58	0.0	2.0	11.9	0.0	0				
GP-2 (12') without filter	12/4/2012	16:03	0.0	6.6	9.6	0.0	0	50s	rainy (~0.3 inches)		
GP-2 (12') with filter		--	0.0	6.7	8.5	0.0	0				
GP-2 (16') without filter		16:08	--	6.1	10.3	0.0	0				
GP-2 (16') with filter		--	--	6.4	9.2	0.0	0				
GP-2 (12') without filter	12/13/2012	13:44	0.0	6.6	9.7	0.0	0	40s	none		
GP-2 (12') with filter		--	0.0	6.9	9.3	0.1 U	2 U				
GP-2 (16') without filter		13:39	0.0	3.7	11.8	0.0	0				
GP-2 (16') with filter		--	0.0	4.1	10.2	0.1 U	2 U				
GP-2 (12') without filter	12/18/2012	13:30	0.0	8.2	9.2	0.0	0	40s	none		
GP-2 (12') with filter		--	0.0	8.1	8.9	0.0	1 <sup>[1]</sup>				
GP-2 (16') without filter		--	0.0	5.8	10.8	0.0	0				
GP-2 (16') with filter		--	0.0	5.7	10.4	0.0	1 <sup>[1]</sup>				
GP-2 (12') without filter	1/24/2013	15:34	0.0	19.9	2.6	0.0	0.0	20s	none		
GP-2 (12') with filter		15:34	0.0	18.6	2.2	0.0	0.0				
GP-2 (16') without filter		15:40	0.0	15.3	7.7	0.0	0.0				
GP-2 (16') with filter		15:40	0.0	16.9	1.6	0.0	0.0				
GP-2 (12') without filter	1/31/2013	13:50	0.0	17.5	5.0	0.0	0.0	10s - 20s	none		
GP-2 (12') with filter		13:50	0.0	17.1	4.2	0.0	0.0				
GP-2 (16') without filter		13:55	0.0	16.8	5.0	0.0	0.0				
GP-2 (16') with filter		13:55	0.0	17.2	3.4	0.0	0.0				
GP-2 (12') without filter	2/7/2013	15:14	0.0	15.4	5.4	0.0	0.0	20s - 50s	none		
GP-2 (12') with filter		15:14	0.0	16.0	3.5	0.0	0.0				
GP-2 (16') without filter		15:17	0.0	15.0	6.4	0.0	0.0				
GP-2 (16') with filter		15:17	0.0	15.3	4.5	0.0	0.0				
GP-2 (12') without filter	2/12/2013	12:30	0.1	9.2	8.8	0.0	0.0	30s - 40s	none		
GP-2 (12') with filter		12:30	0.1	9.7	8.4	0.0	0.0				
GP-2 (16') without filter		12:45	0.0	7.5	9.1	0.0	0.0				
GP-2 (16') with filter		12:45	0.0	6.9	8.2	0.0	0.0				



Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	2/21/2013	13:45	0.0	8.8	8.5	0.0	0.0	20s	Trace		
GP-2 (12') with filter		13:45	0.0	9.1	8.0	0.0	0.0				
GP-2 (16') without filter		13:50	0.0	6.9	7.0	0.0	0.0				
GP-2 (16') with filter		13:50	0.0	7.0	6.7	0.0	0.0				
GP-2 (12') without filter	2/28/2013	12:45	0.0	15.8	4.9	0.0	0.0	30s - 40s	~1 inch		
GP-2 (12') with filter		12:45	0.0	15.8	5.1	0.0	0.0				
GP-2 (16') without filter		12:49	0.0	13.6	6.2	0.0	0.0				
GP-2 (16') with filter		12:49	0.0	13.5	6.2	0.0	0.0				
GP-2	3/7/2013	Inaccessible due to snow cover from road plow activity						30s	None		
GP-2 (12') without filter	3/14/2013	13:45	0.0	16.2	4.3	0.0	0.0	20s - 40s	None		
GP-2 (12') with filter		13:45	0.0	16.1	4.4	0.0	0.0				
GP-2 (16') without filter		13:53	0.0	13.9	6.1	0.0	0.0				
GP-2 (16') with filter		13:53	0.0	13.9	6.2	0.0	0.0				
GP-2 (12') without filter	3/21/2013	12:20	0.0	15.9	3.8	0.0	0.0	20s - 30s	Trace		
GP-2 (12') with filter		12:20	0.0	15.9	3.9	0.0	0.0				
GP-2 (16') without filter		12:26	0.0	14.2	5.7	0.0	0.0				
GP-2 (16') with filter		12:26	0.0	14.1	5.9	0.0	0.0				
GP-2 (12') without filter	3/28/2013	12:10	0.0	14.6	6.1	0.0	0.0	30s - 40s	None		
GP-2 (12') with filter		12:10	0.0	14.4	6.3	0.0	0.0				
GP-2 (16') without filter		12:15	0.0	12.9	7.4	0.0	0.0				
GP-2 (16') with filter		12:15	0.0	12.9	7.5	0.0	0.0				
GP-2 (12') without filter	4/4/2013	14:04	0.0	15.7	5.2	0.0	0.0	30s - 50s	None		
GP-2 (12') with filter		14:04	0.0	15.6	5.1	0.0	0.0				
GP-2 (16') without filter		14:11	0.0	13.8	6.0	0.0	0.0				
GP-2 (16') with filter		14:11	0.0	13.8	6.1	0.0	0.0				
GP-2 (12') without filter	4/9/2013	13:56	0.0	13.9	5.2	0.0	0.0	50s - 80s	None		
GP-2 (12') with filter		13:56	0.0	13.8	5.5	0.0	0.0				
GP-2 (16') without filter		14:03	0.0	12.2	5.9	0.0	0.0				
GP-2 (16') with filter		14:03	0.0	12.2	6.0	0.0	0.0				
GP-2 (12') without filter	4/18/2013	13:48	0.0	14.7	6.1	0.0	0.0	60s - 80s	None		
GP-2 (12') with filter		13:48	0.0	14.7	6.0	0.0	0.0				
GP-2 (16') without filter		13:54	0.0	13.2	7.4	0.0	0.0				
GP-2 (16') with filter		13:54	0.0	13.3	7.2	0.0	0.0				
GP-2 (12') without filter	4/23/2013	14:45	0.0	16.3	3.8	0.0	0.0	50s - 60s	None		
GP-2 (12') with filter		14:45	0.0	16.8	0.8	0.0	0.0				
GP-2 (16') without filter		14:48	0.0	15.9	4.2	0.0	0.0				
GP-2 (16') with filter		14:48	0.0	16.3	2.9	0.0	0.0				
GP-2 (12') without filter	4/30/2013	14:45	0.0	16.8	3.4	0.0	0.0	40s - 70s	None		
GP-2 (12') with filter		14:45	0.0	17.0	0.9	0.0	0.0				
GP-2 (16') without filter		14:50	0.0	16.3	3.9	0.0	0.0				
GP-2 (16') with filter		14:50	0.0	16.7	1.6	0.0	0.0				
GP-2 (12') without filter	5/9/2013	14:41	0.0	14.8	3.3	0.0	0.0	50s - 70s	None		
GP-2 (12') with filter		14:41	0.0	14.9	0.9	0.0	0.0				
GP-2 (16') without filter		14:45	0.0	14.1	3.8	0.0	0.0				
GP-2 (16') with filter		14:45	0.0	14.5	1.5	0.0	0.0				

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	5/16/2013	13:25	0.0	15.3	4.1	0.0	0.0	40s - 80s	~1 inch		
GP-2 (12') with filter		13:25	0.0	15.3	4.0	0.0	0.0				
GP-2 (16') without filter		13:32	0.0	13.9	4.8	0.0	0.0				
GP-2 (16') with filter		13:32	0.0	13.9	4.8	0.0	0.0				
GP-2 (12') without filter	5/21/2013	15:29	0.0	13.7	3.8	0.0	0.0	40s - 80s	~0.2 inch		
GP-2 (12') with filter		15:29	0.0	13.8	3.2	0.0	0.0				
GP-2 (16') without filter		15:32	0.0	12.7	4.5	0.0	0.0				
GP-2 (16') with filter		15:32	0.0	12.8	3.0	0.0	0.0				
GP-2 (12') without filter	5/30/2013	13:20	0.0	15.8	3.8	0.0	0.0	50s - 80s	~1.3 inch		
GP-2 (12') with filter		13:20	0.0	15.8	3.9	0.0	0.0				
GP-2 (16') without filter		13:25	0.0	13.1	5.1	0.0	0.0				
GP-2 (16') with filter		13:25	0.0	13.0	5.3	0.0	0.0				
GP-2 (12') without filter	6/6/2013	14:50	0.0	16.3	4.6	0.0	0.0	60s	0.25 inch		
GP-2 (12') with filter		14:50	0.0	16.2	4.9	0.0	0.0				
GP-2 (16') without filter		15:00	0.0	14.7	6.0	0.0	0.0				
GP-2 (16') with filter		15:00	0.0	14.7	6.2	0.0	0.0				
GP-2 (12') without filter	6/13/2013	16:05	0.0	8.2	5.4	0.0	0.0	60s - 80s	1.55 inch		
GP-2 (12') with filter		16:05	0.0	7.5	5.4	0.0	0.0				
GP-2 (16') without filter		16:10	--	5.2	6.6	0.0	0.0				
GP-2 (16') with filter		16:10	--	5.1	6.4	0.0	0.0				
GP-2 (12') without filter	6/20/2013	--	0.0	8.0	6.1	0.0	0.0	50s - 80s	None		
GP-2 (12') with filter		--	0.0	8.3	5.9	0.0	0.0				
GP-2 (16') without filter		--	--	5.3	6.5	0.0	0.0				
GP-2 (16') with filter		--	--	5.6	6.0	0.0	0.0				
GP-2 (12') without filter	6/27/2013	14:06	0.6	15.9	1.5	0.0	0.0	70s - 80s	Trace		
GP-2 (12') with filter		14:06	0.6	16.3	0.2	0.0	0.0				
GP-2 (16') without filter		14:11	43.6	3.7	2.6	1.6	30				
GP-2 (16') with filter		14:11	43.6	2.1	3.6	1.0	20				
GP-2 (12') without filter	7/3/2013	13:18	23.5	6.9	4.9	1.4	28	60s - 80s	Trace		
GP-2 (12') with filter		13:18	23.5	7.5	3.4	0.7	13				
GP-2 (16') without filter		13:22	59.6	1.9	7.1	5.8	>100				
GP-2 (16') with filter		13:22	59.6	1.6	6.9	1.8	36				
GP-2 (12') without filter	7/11/2013	14:45	40.4	4.0	6.5	6.5	>100	60s - 70s	None		
GP-2 (12') with filter		14:45	40.4	4.0	4.9	3.4	68				
GP-2 (16') without filter		14:51	55.6	4.6	6.2	11.2	>100				
GP-2 (16') with filter		14:51	55.6	3.9	5.0	2.2	44				
GP-2 (12') without filter	7/18/2013	14:35	20.4	17.7	1.2	0.5	10	70s - 90s	None		
GP-2 (12') with filter		14:35	20.4	17.7	1.0	0.2	5				
GP-2 (16') without filter		14:41	44.3	1.9	7.4	5.1	>100				
GP-2 (16') with filter		14:41	44.3	4.7	1.8	1.8	36				
GP-2 (12') without filter	7/25/2013	14:15	38.7	4.8	6.5	3.8	75	50s - 70s	None		
GP-2 (12') with filter		14:15	38.7	4.7	6.1	3.0	60				
GP-2 (16') without filter		14:20	48.3	4.4	7.9	4.0	80				
GP-2 (16') with filter		14:20	48.3	4.2	8.3	3.3	65				
GP-2 (12') without filter	8/1/2013	14:00	83.5	8.1	5.3	1.4	28	60s - 80s	None		
GP-2 (12') with filter		14:00	83.5	6.2	4.9	1.1	21				
GP-2 (16') without filter		14:05	89.8	4.1	7.3	2.8	55				
GP-2 (16') with filter		14:05	89.8	3.1	7.2	1.8	35				

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	8/6/2013	14:06	10.5	3.9	7.6	1.3	27	60s - 80s	None		
GP-2 (12') with filter		14:06	10.5	3.7	5.9	1.0	21				
GP-2 (16') without filter		14:10	31.6	4.3	7.4	2.5	51				
GP-2 (16') with filter		14:10	31.6	3.1	6.1	1.7	34				
GP-2 (12') without filter	8/15/2013	13:35	16.6	7.9	3.1	2.0	40	40s - 70s	None		
GP-2 (12') with filter		13:35	16.6	7.7	3.3	1.6	32				
GP-2 (16') without filter		13:40	20.6	1.5	6.2	2.2	44				
GP-2 (16') with filter		13:40	20.6	1.4	7.5	2.0	40				
GP-2 (12') without filter	8/22/2013	14:41	33.9	3.2	8.0	2.3	47	60s - 80s	Trace (0.06 in.)		
GP-2 (12') with filter		14:41	33.9	3.2	8.4	2.0	41				
GP-2 (16') without filter		14:45	55.0	1.8	8.5	4.3	87				
GP-2 (16') with filter		14:45	55.0	1.6	8.3	2.0	41				
GP-2 (12') without filter	8/27/2013	14:21	22.8	2.5	8.4	3.7	74	70s - 80s	None		
GP-2 (12') with filter		14:21	22.8	2.6	8.9	1.9	39				
GP-2 (16') without filter		14:26	39.5	2.3	8.7	7.9	>100				
GP-2 (16') with filter		14:26	39.5	2.2	9.0	6.1	>100				
GP-2 (12') without filter	9/5/2013	-	31.3	2.2	8.7	7.0	>100	50s - 80s	None		
GP-2 (12') with filter		-	31.3	2.3	6.9	3.0	58				
GP-2 (16') without filter		-	39.0	3.1	8.3	8.4	>100				
GP-2 (16') with filter		-	39.0	3.7	6.5	2.8	56				
GP-2	9/12/2013	Inaccessible due to high water/flood conditions						60s - 80s	0.29 inches		
GP-2 (12') without filter	9/20/2013		24.7	2.6	8.7	3.2	65	60s - 80s	0.6 inches	1009 - 1013	
GP-2 (12') with filter			24.7	2.1	8.1	1.8	34				
GP-2 (16') without filter			40.4	1.4	9.6	7.0	>100				
GP-2 (16') with filter			40.4	1.5	8.9	2.1	42				
GP-2 (12') without filter	9/24/2013	14:27	55.7	1.8	9.6	3.6	71	40s - 70s	None	1016 - 1018	
GP-2 (12') with filter		14:27	55.7	1.9	9.2	3.3	67				
GP-2 (16') without filter		14:33	68.4	1.5	10.0	4.3	86				
GP-2 (16') with filter		14:33	68.4	1.6	10.6	3.9	78				
GP-2 (12') without filter	10/3/2013	13:27	0.9	6.8	7.2	1.3	25	60s - 70s	0.27 inches	1015 - 1022	
GP-2 (12') with filter		13:27	0.9	6.9	5.8	1.1	17				
GP-2 (16') without filter		13:35	53.6	3.6	8.9	2.2	44				
GP-2 (16') with filter		13:35	53.6	3.3	7.5	1.4	27				
GP-2 (12') without filter	10/10/2013	13:41	18.6	0.7	10.3	1.9	38	40s - 70s	None	1020 - 1022	
GP-2 (12') with filter		13:41	18.6	0.5	10.2	1.3	27				
GP-2 (16') without filter		13:47	22.6	0.9	10.3	1.9	39				
GP-2 (16') with filter		13:47	22.6	1.7	9.0	1.2	25				
GP-2 (12') without filter	10/17/2013	14:46	22.8	1.2	10.5	1.4	28	40s - 50s	0.1 inches	1011 - 1014	MW-7: 18.56 MW-8: 18.70 MW-11: 20.31 MW-12: 20.39
GP-2 (12') with filter		14:46	22.8	7.5	6.8	0.8	16				
GP-2 (16') without filter		14:50	23.1	1.3	10.6	1.5	29				
GP-2 (16') with filter		14:50	23.1	1.5	10.1	1.2	23				
GP-2 (12') without filter	10/24/2013	13:42	0.0	1.5	10.9	0.0	0	30s - 40s	Trace (0.02 inches)	1015 - 1025	MW-7: 18.69 MW-8: 18.83 MW-11: 20.66 MW-12: 20.44
GP-2 (12') with filter		13:42	0.0	1.6	10.2	0.0	0				
GP-2 (16') without filter		13:47	5.6	4.6	9.6	0.0	0				
GP-2 (16') with filter		13:47	5.6	4.9	8.6	0.0	0				
GP-2 (12') without filter	10/31/2013	15:07	0.0	6.3	8.2	0.0	0	60s	1.25 inches	1000 - 1010	MW-7: 18.71 MW-8: 18.87 MW-11: 20.69 MW-12: 20.47
GP-2 (12') with filter		15:07	0.0	6.4	7.3	0.0	0				
GP-2 (16') without filter		15:13	1.1	6.4	8.3	0.0	0				
GP-2 (16') with filter		15:13	1.1	6.7	7.5	0.0	0				

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	11/7/2013	13:45	0.0	4.6	9.5	0.0	0	40s	Trace (0.04 inches)	1020 - 1025	MW-7: 18.43
GP-2 (12') with filter		13:45	0.0	4.1	7.9	0.0	0				MW-8: 18.57
GP-2 (16') without filter		13:51	0.0	2.6	10.7	0.0	0				MW-11: 20.28
GP-2 (16') with filter		13:51	0.0	2.6	10.2	0.0	0				MW-12: 20.13
GP-2 (12') without filter	11/12/2013	13:32	0.0	5.8	9.5	0.0	0	20s - 30s	Trace (0.05 inches)	1030 - 1036	MW-7: 18.28
GP-2 (12') with filter		13:32	0.0	6.2	8.6	0.0	0				MW-8: 18.37
GP-2 (16') without filter		13:38	0.0	5.4	9.6	0.0	0				MW-11: 20.02
GP-2 (16') with filter		13:38	0.0	5.3	8.6	0.0	0				MW-12: 19.86
GP-2 (12') without filter	11/20/2013	14:10	0.0	4.5	10.1	0.0	0	20s - 40s	None	1023 - 1026	MW-7: 18.27
GP-2 (12') with filter		14:10	0.0	5.0	8.3	0.0	0				MW-8: 18.40
GP-2 (16') without filter		14:15	0.0	3.5	10.4	0.0	0				MW-11: 20.24
GP-2 (16') with filter		14:15	0.0	4.0	9.8	0.0	0				MW-12: 20.02
GP-2 (12') without filter	11/26/2013	14:35	0.0	3.4	10.4	0.1	1	30s	Trace (0.01 inches)	1013 - 1019	MW-7: 18.10
GP-2 (12') with filter		14:35	0.0	3.4	9.5	0.0	0				MW-8: 18.25
GP-2 (16') without filter		14:39	0.0	3.3	10.7	0.1	1				MW-11: 20.07
GP-2 (16') with filter		14:39	0.0	3.3	10.6	0.1	1				MW-12: 19.85
GP-2 (12') without filter	12/5/2013	14:44	0.0	6.5	9.7	0.0	0	30s - 40s	0.07 inches	1013 - 1016	MW-7: 18.38
GP-2 (12') with filter		14:44	0.0	6.6	8.7	0.0	0				MW-8: 18.52
GP-2 (16') without filter		14:49	0.0	7.3	9.1	0.0	0				MW-11: 20.35
GP-2 (16') with filter		14:49	0.0	7.4	8.3	0.0	0				MW-12: 20.13
GP-2 (12') without filter	12/12/2013	15:45	0.0	9.9	8.5	0.0	0	15 - 20	None	1030 - 1036	MW-7: 18.45
GP-2 (12') with filter		15:45	0.0	9.7	8.3	0.0	0				MW-8: 18.60
GP-2 (16') without filter		15:49	0.0	7.3	10.4	0.0	0				MW-11: 20.42
GP-2 (16') with filter		15:49	0.0	6.9	9.8	0.0	0				MW-12: 20.20
GP-2 (12') without filter	12/19/2013	14:48	0.0	10.8	7.8	0.0	0	30s - 40s	None	1016 - 1018	MW-7: 18.39
GP-2 (12') with filter		14:48	0.0	11.0	6.8	0.0	0				MW-8: 18.54
GP-2 (16') without filter		14:51	0.0	9.0	8.9	0.0	0				MW-11: 20.37
GP-2 (16') with filter		14:51	0.0	9.6	7.9	0.0	0				MW-12: 20.21
GP-2 (12') without filter	12/23/2013	11:20	0.0	8.1	7.9	0.0	0	20s - 30s	Trace (0.02 inches)	1026 - 1029	MW-7: 15.63
GP-2 (12') with filter		11:20	0.0	8.1	6.9	0.0	0				MW-8: 15.72
GP-2 (16') without filter		11:27	0.0	5.8	10.4	0.0	0				MW-11: 17.45
GP-2 (16') with filter		11:27	0.0	7.6	8.7	0.0	0				MW-12: 17.32
GP-2 (12') without filter	1/2/2014	16:20	0.0	21.5	0.1	0.0	0	20s - 30s	5.46 inches	1012 - 1026	MW-7: 15.24
GP-2 (12') with filter		16:20	0.0	18.2	0.3	0.0	0				MW-8: 15.39
GP-2 (16') without filter		16:24	0.0	21.4	0.3	0.0	0				MW-11: 17.21
GP-2 (16') with filter		16:24	0.0	21.5	0.3	0.0	0				MW-12: 16.98
GP-2 (12') without filter	1/9/2014	14:40	0.0	13.8	6.6	0.0	0	20s - 30s	1.55 inches	1026 - 1035	MW-7: 15.17
GP-2 (12') with filter		14:40	0.0	14.0	6.0	0.0	0				MW-8: 15.28
GP-2 (16') without filter		14:45	0.0	12.0	8.2	0.0	0				MW-11: 17.11
GP-2 (16') with filter		14:45	0.0	13.1	6.7	0.0	0				MW-12: 16.98
GP-2 (12') without filter	1/16/2014	13:00	0.0	13.8	6.1	0.0	0	20s - 30s	0.97 inches	1008 - 1019	MW-7: 15.93
GP-2 (12') with filter		13:00	0.0	13.9	3.8	0.0	0				MW-8: 16.06
GP-2 (16') without filter		13:07	0.0	12.9	7.2	0.0	0				MW-11: 17.90
GP-2 (16') with filter		13:07	0.0	13.2	4.1	0.0	0				MW-12: 17.71
GP-2 (12') without filter	1/23/2014	13:00	0.0	16.8	5.1	0.0	0	5 - 15	Trace	1019 - 1038	MW-7: 15.62
GP-2 (12') with filter		13:00	0.0	16.5	4.7	0.0	0				MW-8: 15.83
GP-2 (16') without filter		13:07	0.0	15.4	6.0	0.0	0				MW-11: 17.59
GP-2 (16') with filter		13:07	0.0	15.3	4.9	0.0	0				MW-12: 17.46

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	1/28/2014	14:25	0.0	17.3	4.6	0.0	0	5	None	1030 - 1033	MW-7: 17.27
GP-2 (12') with filter		14:25	0.0	17.3	4.1	0.0	0				MW-8: 17.41
GP-2 (16') without filter		14:30	0.0	15.2	6.5	0.0	0				MW-11 & MW-12: iced over
GP-2 (16') with filter		14:30	0.0	15.2	5.8	0.0	0				
GP-2 (12')	2/6/2014	Inaccessible due to snow coverage from road plows						15 - 25	0.3 inches	1029 - 1032	Inaccessible
GP-2 (12') without filter	2/13/2014	15:16	0.0	17.5	4.5	0.0	0	25 - 35	None	1003 - 1018	MW-7: 17.62
GP-2 (12') with filter		15:16	0.0	17.7	3.8	0.0	0				MW-8: 17.77
GP-2 (16') without filter		15:20	0.0	19.3	2.2	0.0	0				MW-11 & MW-12: iced over
GP-2 (16') with filter		15:20	0.0	19.5	0.6	0.0	0				
GP-2 (12') without filter	2/20/2014	14:12	0.0	16.8	4.3	0.0	0	35 - 40	None	1010 - 1014	MW-7: 17.53
GP-2 (12') with filter		14:12	0.0	16.8	4.0	0.0	0				MW-8: 17.66
GP-2 (16') without filter		14:14	0.0	15.8	5.4	0.0	0				MW-11: 19.50
GP-2 (16') with filter		14:14	0.0	15.9	4.5	0.0	0				MW-12: 19.27
GP-2 (12') without filter	2/27/2014	13:10	0.1	19.3	2.3	0.0	0	15 - 25	Trace	1008 - 1024	MW-7: 15.64
GP-2 (12') with filter		13:10	0.1	19.4	1.7	0.0	0				MW-8: 15.78
GP-2 (16') without filter		13:17	0.0	17.2	4.8	0.1	0				MW-11: 17.59
GP-2 (16') with filter		13:17	0.0	17.4	4.1	0.0	0				MW-12: 17.41
GP-2 (12') without filter	3/6/2014	14:21	0.0	17.8	4.3	0.0	0	35 - 45	None	1020 - 1029	MW-7: na
GP-2 (12') with filter		14:21	0.0	17.7	4.1	0.0	0				MW-8: na
GP-2 (16') without filter			0.0	16.8	5.2	0.0	0				MW-11: na
GP-2 (16') with filter			0.0	16.7	5.1	0.0	0				MW-12: na
GP-2 (12') without filter	4/2/2014	11:57	0.0	18.1	3.5	0.0	0	50s	Trace (0.15 inches)	1020	MW-7: 14.12
GP-2 (12') with filter		11:57	0.0	18.0	3.7	0.0	0				MW-8: 14.32
GP-2 (16') without filter			0.0	17.3	4.4	0.0	0				MW-11: 16.06
GP-2 (16') with filter			0.0	17.3	4.5	0.0	0				MW-12: 15.91
GP-2 (12') without filter	5/8/2014 <sup>[3]</sup>	15:18	0.2	16.3	3.0	0.0	0	75-85	None	1013-1017	MW-7: 16.84
GP-2 (12') with filter		15:18	0.2	16.4	2.5	0.0	0				MW-8: 16.70
GP-2 (16') without filter		15:22	0.5	20.3	0.0	0.0	0				MW-11: 18.68
GP-2 (16') with filter		15:22	0.5	20.0	1.6	0.0	0				MW-12: 18.46
GP-2 (12') without filter	6/3/2014	15:40	0.0	12.6	4.1	0.0	0	75-85	Trace	1011-1014	MW-7: na
GP-2 (12') with filter		15:40	0.0	12.6	3.7	0.0	0				MW-8: na
GP-2 (16') without filter		15:45	0.1	11.6	4.4	0.0	0				MW-11: na
GP-2 (16') with filter		15:45	0.1	11.7	4.4	0.0	0				MW-12: na
GP-2 (12') without filter	7/17/2014	15:17	0.0	2.2	6.7	0.0	0	70-75	None	1016-1020	MW-7: 17.37
GP-2 (12') with filter		15:17	0.0	2.1	6.4	0.0	0				MW-8: 17.51
GP-2 (16') without filter		15:23	15.0	1.7	6.7	1.7	35				MW-11: 19.36
GP-2 (16') with filter		15:23	15.0	1.7	6.2	1.1	23				MW-12: 19.13
GP-2 (12') without filter	8/14/2014	14:40	13.3	2.2	7.4	1.6	33	70-80	None	1014-1017	MW-7: 18.33
GP-2 (12') with filter		14:40	13.3	2.3	6.4	1.4	29				MW-8: 18.19
GP-2 (16') without filter		14:46	45.8	1.3	8.2	5.8	>100				MW-11: 20.17
GP-2 (16') with filter		14:46	45.8	1.3	7.6	2.4	49				MW-12: 19.94
GP-2 (12') without filter	8/21/2014	15:51	25.6	0.9	8.5	2.7	55	75-79	1.14 inches	1014-1018	MW-7: na
GP-2 (12') with filter		15:51	25.6	0.9	8.2	1.8	36				MW-8: na
GP-2 (16') without filter		14:45	7.2	0.8	9.2	6.0	>100				MW-11: na
GP-2 (16') with filter		14:45	7.2	0.8	8.2	2.4	48				MW-12: na
GP-2 (12') without filter	8/28/2014	11:40	35.4	0.7	9.2	4.5	90	75-80	None	1016-1019	MW-7: 18.11
GP-2 (12') with filter		11:40	35.4	0.7	7.4	2.4	48				MW-8: 18.25
GP-2 (16') without filter		11:43	40.0	1.7	9.5	5.9	>100				MW-11: 20.10
GP-2 (16') with filter		11:43	40.0	1.6	8.3	2.2	45				MW-12: 19.87

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	9/4/2014	14:40	26.5	3.8	7.6	2.3	46	85-90	None	1016-1019	MW-7: na
GP-2 (12') with filter		14:40	26.5	3.9	7.9	2.1	41				MW-8: na
GP-2 (16') without filter		14:45	38.2	6.1	7.1	3.3	66				MW-11: na
GP-2 (16') with filter		14:45	38.2	6.1	7.3	3.0	60				MW-12: na
GP-2 (12') without filter	10/9/2014	13:34	0.0	4.8	9.0	0.0	0	50s	0.3 Inches	1017-1021	MW-7: na
GP-2 (12') with filter		13:34	0.0	5.2	9.3	0.0	0				MW-8: na
GP-2 (16') without filter		13:40	0.0	3.5	10.4	0.0	0				MW-11: na
GP-2 (16') with filter		13:40	0.0	3.6	10.2	0.0	0				MW-12: na
GP-2 (12') without filter	11/26/2014	13:43	0.0	14.6	4.1	0.0	0	30-35	None	1018-1023	MW-7: na
GP-2 (12') with filter		13:43	0.0	15.0	1.6	0.0	0				MW-8: na
GP-2 (16') without filter		13:46	0.0	13.6	4.6	0.0	0				MW-11: na
GP-2 (16') with filter		13:46	0.0	13.4	2.3	0.0	0				MW-12: na
GP-2 (12') without filter	2/6/2015	16:00	0.0	20.6	0.0	0.0	0	25-35	None	1022 - 1030	MW-7: 17.85
GP-2 (12') with filter		16:00	0.0	20.7	0.0	0.0	0				MW-8: 17.98
GP-2 (16') without filter		16:04	0.0	14.7	5.9	0.0	0				MW-11: 19.81
GP-2 (16') with filter		16:04	0.0	14.8	5.2	0.0	0				MW-12: 19.59
GP-2 (12') without filter	5/20/2015	16:09	0.0	9.5	4.2	0.0	0	50-60	None	1016 - 1022	MW-7: 17.45
GP-2 (12') with filter		16:09	0.0	9.8	3.4	0.0	0				MW-8: 17.60
GP-2 (16') without filter		16:11	0.0	7.1	5.2	0.0	0				MW-11: 19.43
GP-2 (16') with filter		16:11	0.0	7.0	4.9	0.0	0				MW-12: 19.21
GP-2 (12') without filter	8/20/2015	14:00	0.0	4.4	9.0	0.0	0	65-70	Trace	1009 - 1017	MW-7: 17.75
GP-2 (12') with filter		14:00	0.0	4.4	8.4	0.0	0				MW-8: 17.56
GP-2 (16') without filter		14:04	1.2	2.3	9.8	0.1	3				MW-11: 19.54
GP-2 (16') with filter		14:04	1.2	2.5	9.6	0.1	2				MW-12: 19.30
GP-2 (12') without filter	11/5/2015	14:22	0.0	2.2	9.7	0.0	0	60-70	Trace	1019 - 1021	MW-7: 18.60
GP-2 (12') with filter		14:22	0.0	2.3	7.5	0.0	0				MW-8: 18.46
GP-2 (16') without filter		14:25	0.0	1.2	10.5	0.0	0				MW-11: 20.43
GP-2 (16') with filter		14:25	0.0	1.2	8.7	0.0	0				MW-12: 20.20
GP-2 (12') without filter	1/28/2016	14:42	0.0	14.2	6.2	0.0	0	35-45	Trace	1005 - 1012	MW-7: 17.54
GP-2 (12') with filter		14:42	0.0	14.5	4.9	0.0	0				MW-8: 17.40
GP-2 (16') without filter		14:47	0.0	12.0	7.9	0.0	0				MW-11: 19.37
GP-2 (16') with filter		14:47	0.0	12.1	7.4	0.0	0				MW-12: 19.15
GP-2 (12') without filter	7/21/2016	14:26	74.9	1.5	7.5	13.5	>100	88-91	None	1019 - 1020	MW-7: 18.77
GP-2 (12') with filter		14:26	74.9	1.3	7.4	4.5	87				MW-8: 18.65
GP-2 (16') without filter		14:32	98.1	1.3	7.8	34.6	>100				MW-11: 20.61
GP-2 (16') with filter		14:32	98.1	1.4	7.5	5.0	>100				MW-12: 20.37
GP-2 (12') without filter	7/29/2016 <sup>[4]</sup>	11:06	68.4	0.5	7.5	13.7	>100	85-86	None	1010 - 1014	MW-7: 19.08
GP-2 (12') with filter		11:06	68.4	10.1	3.4	2.1	42				MW-8: 18.86
GP-2 (16') without filter		11:17	83.5	0.7	7.7	39.2	>100				MW-11: 20.58
GP-2 (16') with filter		11:17	83.5	9.8	3.7	2.6	52				MW-12: 20.68
GP-2 (12') without filter	8/5/2016	17:08	30.4	0.1	7.7	12.3	>100	87 - 91	None	1012 - 1014	MW-7: 19.20
GP-2 (12') with filter		17:08	30.4	0.1	7.6	4.5	91				MW-8: 19.05
GP-2 (16') without filter		17:12	63.0	0.2	7.9	37.8	>100				MW-11: 21.03
GP-2 (16') with filter		17:12	63.0	0.9	7.4	5.1	>100				MW-12: 20.78

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	8/13/2016	11:25	41.8	0.0	8.2	15.5	>100	79 - 84	Trace	1011 - 1015	MW-7: 19.24
GP-2 (12') with filter		11:25	41.8	0.9	7.6	4.5	90				MW-8: 19.38
GP-2 (16') without filter		11:32	73.0	0.0	8.6	44.1	>100				MW-11: 20.97
GP-2 (16') with filter		11:32	73.0	1.6	7.7	4.9	99				MW-12: 21.08
GP-2 (12') without filter	8/19/2016 <sup>[5]</sup>	11:04	8.1	0.0	8.9	16.7	>100	77 - 86	None	1014 - 1017	MW-7: 19.04
GP-2 (12') with filter		11:04	8.1	0.1	8.6	4.1	82				MW-8: 18.90
GP-2 (16') without filter		11:12	17.0	0.3	9.2	30.5	>100				MW-11: 20.87
GP-2 (16') with filter		11:12	17.0	0.4	9.0	4.2	84				MW-12: 20.64
GP-2 (12') without filter	8/23/2016	12:53	47.9	0.1	8.3	9.3	>100	75 -80	None	1023 -1026	MW-7: 18.99
GP-2 (12') with filter		12:53	47.9	0.1	8.3	3.4	68				MW-8: 19.12
GP-2 (16') without filter		12:59	68.3	0.0	8.7	15.5	>100				MW-11: 20.70
GP-2 (16') with filter		12:59	68.3	0.0	8.7	3.5	70				MW-12: 20.81
GP-2 (12') without filter	8/29/2016	13:08	60.7	0.4	8.8	6.4	>100	79-88	None	1022 - 1025	MW-7: 19.11
GP-2 (12') with filter		13:08	60.7	0.4	8.6	3.0	60				MW-8: 18.98
GP-2 (16') without filter		13:13	82.5	0.2	9.3	15.7	>100				MW-11: 20.71
GP-2 (16') with filter		13:13	82.5	0.3	9.0	3.3	65				MW-12: 20.85
GP-2 (12') without filter	9/7/2016		18.1	0.0	8.5	4.5	90	75 - 90	None	1019 - 1022	MW-7: 19.45
GP-2 (12') with filter			18.1	0.0	8.0	2.8	56				MW-8: 19.29
GP-2 (16') without filter			33.0	0.0	8.7	13.3	>100				MW-11: 21.74
GP-2 (16') with filter			33.0	0.0	8.5	3.6	73				MW-12: 21.03
GP-2 (12') without filter	9/14/2016		32.7	0.0	9.3	6.9	>100	75 - 85	Trace	1020 - 1024	MW-7: 19.37
GP-2 (12') with filter			32.7	0.0	9.4	3.2	65				MW-8: 19.22
GP-2 (16') without filter			53.1	0.0	9.6	20.1	>100				MW-11: 21.10
GP-2 (16') with filter			53.1	0.0	9.6	4.0	80				MW-12: 20.91
GP-2 (12') without filter	9/20/2016	14:10	25.5	0.0	8.8	7.4	>100	72 - 86	None	1019 - 1022	MW-7: 19.55
GP-2 (12') with filter		14:10	25.5	0.0	8.8	3.3	67				MW-8: 19.41
GP-2 (16') without filter		14:28	37.7	0.0	9.0	19.4	>100				MW-11: 21.24
GP-2 (16') with filter		14:28	37.7	0.0	8.8	4.0	80				MW-12: 21.15
GP-2 (12') without filter	9/28/2016	14:43	28.5	0.1	10.0	6.6	>100	50 - 60	1 inch	1009 - 1014	MW-7: 19.67
GP-2 (12') with filter		14:43	28.5	0.0	10.1	3.1	62				MW-8: 19.52
GP-2 (16') without filter		14:48	35.2	0.1	10.2	16.6	>100				MW-11: 21.51
GP-2 (16') with filter		14:48	35.2	0.1	10.2	3.7	74				MW-12: 21.26
GP-2 (12') without filter	10/7/2016	11:38	88.4	0.0	9.4	6.7	>100	55 - 79	None	1016 - 1020	MW-7: 19.56
GP-2 (12') with filter		11:38	88.4	0.0	9.3	2.8	56				MW-8: 19.40
GP-2 (16') without filter		11:43	89.5	0.0	9.7	11.9	>100				MW-11: 21.38
GP-2 (16') with filter		11:43	89.5	0.0	8.6	3.4	68				MW-12: 21.13
GP-2 (12') without filter	10/12/2016	15:44	27.9	0.0	9.4	4.7	94	50 - 77	Trace	1017 - 1023	MW-7: 19.69
GP-2 (12') with filter		15:44	27.9	0.0	9.2	2.7	54				MW-8: 19.55
GP-2 (16') without filter		15:40	44.2	0.0	9.7	10.2	>100				MW-11: 21.27
GP-2 (16') with filter		15:40	44.2	0.0	9.4	2.9	59				MW-12: 21.52

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
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## Notes:

- [1] - The explosive gas monitor baseline reading was 1 percent LEL. The meter did not zero for LEL readings and the corresponding methane readings were 0 percent; therefore, the readings of 1 percent are anomalous.
- [2] - The Landtec GEM 2000 combustible gas monitor measures explosive gases as a percent of methane by volume. The presence of other hydrocarbon gases affects methane readings.
- [3] -CO<sub>2</sub> readings started at 0.1 ppm.
- [4] -GHD field personnel noted the presence of a manhole (and a possible underground utility) located ~ 3 feet from GP-2 that may be contributing to elevated methane levels
- [5] Collected SUMMA canister samples at GP-2 (12')(16')
- PID - Photoionization Detector
- O<sub>2</sub> - Oxygen
- CO<sub>2</sub> - Carbon Dioxide
- CH<sub>4</sub> - Methane
- LEL - Lower Explosive Limit
- NM - Not measured
- U - Qualified as non-detect due to issues with the filter
- Value - Value is greater than LEL for methane (5 percent methane)

Source of weather data from July to October 2016:

[https://www.wunderground.com/history/airport/KDAY/2016/9/28/DailyHistory.html?req\\_city=&req\\_state=&req\\_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=](https://www.wunderground.com/history/airport/KDAY/2016/9/28/DailyHistory.html?req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=)



Table 2

**GP-2 Analytical Results Summary - August 2016**  
**South Dayton Dump and Landfill**  
**Moraine, Ohio**

Location ID:		GP-2	GP-2
Sample Name:		A-38443-081916-JC-001	A-38443-081916-JC-002
Sample Date:		08/19/2016	08/19/2016
Depth:		12 ft	16 ft
Parameters	Unit		
<b>Volatile Organic Compounds</b>			
Methane	%v/v	3.9	4.0
1,1,1-Trichloroethane	ppbv	720 U	690 U
1,1,2,2-Tetrachloroethane	ppbv	1500 U	1400 U
1,1,2-Trichloroethane	ppbv	1300 U	1200 U
1,1-Dichloroethane	ppbv	620 U	600 U
1,1-Dichloroethene	ppbv	820 U	790 U
1,2,4-Trichlorobenzene	ppbv	2400 U	2300 U
1,2,4-Trimethylbenzene	ppbv	1500 U	1500 U
1,2-Dibromoethane (Ethylene dibromide)	ppbv	1100 U	1000 U
1,2-Dichlorobenzene	ppbv	1700 U	1600 U
1,2-Dichloroethane	ppbv	1100 U	1100 U
1,2-Dichloropropane	ppbv	1200 U	1200 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	770 UJ	740 UJ
1,3,5-Trimethylbenzene	ppbv	1600 U	1500 U
1,3-Butadiene	ppbv	1500 U	1500 U
1,3-Dichlorobenzene	ppbv	1600 U	1500 U
1,4-Dichlorobenzene	ppbv	1500 U	1500 U
1,4-Dioxane	ppbv	1900 U	1800 U
2,2,4-Trimethylpentane	ppbv	26000	28000
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	4800 U	4600 U
2-Chlorotoluene	ppbv	1500 U	1500 U
2-Hexanone	ppbv	1400 U	1300 U
2-Phenylbutane (sec-Butylbenzene)	ppbv	1500 U	1500 U
4-Ethyl toluene	ppbv	1600 U	1500 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	1100 U	1000 U
Acetone	ppbv	34000 U	32000 U
Allyl chloride	ppbv	1200 U	1100 U
Benzene	ppbv	1300 U	1300 U
Benzyl chloride	ppbv	1900 U	1800 U
Bromodichloromethane	ppbv	1100 U	1000 U
Bromoform	ppbv	1200 U	1100 U
Bromomethane (Methyl bromide)	ppbv	770 U	740 U
Butane	ppbv	280000	470000
Carbon disulfide	ppbv	740 U	720 U
Carbon tetrachloride	ppbv	910 U	880 U
Chlorobenzene	ppbv	1200 U	1100 U
Chlorodifluoromethane	ppbv	890 U	850 U
Chloroethane	ppbv	840 U	810 U
Chloroform (Trichloromethane)	ppbv	910 U	880 U
Chloromethane (Methyl chloride)	ppbv	3800 U	3700 U
cis-1,2-Dichloroethene	ppbv	1400 U	1400 U
cis-1,3-Dichloropropene	ppbv	1800 U	1700 U
Cyclohexane	ppbv	4100 J	25000
Cymene (p-Isopropyltoluene)	ppbv	1400 U	1300 U
Dibromochloromethane	ppbv	1000 U	970 U
Dichlorodifluoromethane (CFC-12)	ppbv	1600 U	1600 U

Table 2

**GP-2 Analytical Results Summary - August 2016**  
**South Dayton Dump and Landfill**  
**Moraine, Ohio**

Location ID:		GP-2	GP-2
Sample Name:		A-38443-081916-JC-001	A-38443-081916-JC-002
Sample Date:		08/19/2016	08/19/2016
Depth:		12 ft	16 ft
Parameters	Unit		
Ethylbenzene	ppbv	1600 U	1600 U
Hexachlorobutadiene	ppbv	1900 U	1800 U
Hexane	ppbv	9100 J	33000
Isopropyl alcohol	ppbv	2300 U	2200 U
Isopropyl benzene	ppbv	1400 U	1400 U
m&p-Xylenes	ppbv	2900 U	2800 U
Methyl methacrylate	ppbv	1900 U	1800 U
Methyl tert butyl ether (MTBE)	ppbv	4100 U	3900 U
Methylene chloride	ppbv	3100 U	3000 U
N-Butylbenzene	ppbv	1100 U	1100 U
N-Heptane	ppbv	1100 U	9200 J
N-Propylbenzene	ppbv	1300 U	1300 U
Naphthalene	ppbv	2200 U	2100 U
o-Xylene	ppbv	1500 U	1400 U
Styrene	ppbv	1400 U	1300 U
tert-Butyl alcohol	ppbv	910 U	880 U
tert-Butylbenzene	ppbv	1600 U	1500 U
Tetrachloroethene	ppbv	960 U	920 U
Tetrahydrofuran	ppbv	1500 U	1500 U
Toluene	ppbv	2900 U	2800 U
trans-1,2-Dichloroethene	ppbv	1200 U	1200 U
trans-1,3-Dichloropropene	ppbv	1200 U	1100 U
Trichloroethene	ppbv	860 U	830 U
Trichlorofluoromethane (CFC-11)	ppbv	580 U	550 U
Trifluorotrichloroethane (CFC-113)	ppbv	740 U	720 U
Vinyl bromide (Bromoethene)	ppbv	840 UJ	810 UJ
Vinyl chloride	ppbv	1700 UJ	1600 UJ

## Notes:

U - Not present at or above the associated value

UJ - Not detected; associated reporting limit is estimated

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation
GP22-13 (20') without filter	7/11/2013	14:55	0.1	8.4	3.4	0.0	0	60s - 70s	None
GP22-13 (20') with filter		14:55	0.1	8.4	3.6	0.0	0		
GP23-13 (18.5') without filter		15:01	0.9	15.6	3.2	0.0	0		
GP23-13 (18.5') with filter		15:01	0.9	15.0	2.1	0.0	0		
GP24A-13 (20') without filter		15:05	1.4	10.1	7.2	0.0	0		
GP24A-13 (20') without filter		15:05	1.4	8.6	7.5	0.0	0		
GP24B-13 (4.5') without filter		15:10	0.3	11.5	6.1	0.0	0		
GP24B-13 (4.5') with filter		15:10	0.3	11.4	5.9	0.0	0		
GP-7 (8') without filter	7/18/2013	15:31	0.0	16.2	3.0	0.0	0	70s - 90s	None
GP-7 (8') with filter		15:31	0.0	16.1	3.2	0.0	0		
GP-7 (12') without filter		15:31	0.0	13.0	5.0	0.0	0		
GP-7 (12') with filter		15:31	0.0	13.4	4.8	0.0	0		
GP12-09 (6') without filter		15:25	0.1	0.9	10.2	0.5	12		
GP12-09 (6') with filter		15:25	0.1	1.2	11.3	0.6	12		
GP22-13 (20') without filter		14:45	0.3	14.5	1.0	0.0	0		
GP22-13 (20') with filter		14:45	0.3	14.6	1.3	0.1	1		
GP23-13 (18.5') without filter		14:51	0.0	12.2	5.3	0.0	0		
GP23-13 (18.5') with filter		14:51	0.0	12.4	6.0	0.1	1		
GP24A-13 (20') without filter		14:57	0.6	14.4	4.2	0.0	0		
GP24A-13 (20') without filter		14:57	0.6	14.2	4.8	0.0	0		
GP24B-13 (4.5') without filter		15:02	0.0	14.1	4.9	0.0	0		
GP24B-13 (4.5') with filter		15:02	0.0	16.8	3.1	0.0	0		
GP-7 (8') with filter	7/25/2013	14:24	0.0	16.8	3.4	0.0	0	50s - 70s	None
GP-7 (8') without filter		14:24	0.0	16.7	3.2	0.0	0		
GP-7 (12') with filter		14:24	0.0	13.2	5.7	0.0	0		
GP-7 (12') without filter		14:24	0.0	13.2	6.1	0.0	0		
GP-7 (16') with filter		14:24	0.0	10.4	6.6	0.0	0		
GP-7 (16') without filter		14:24	0.0	10.4	6.8	0.0	0		
GP12-09 (6') with filter		14:37	0.6	18.0	3.9	0.0	0		
GP12-09 (6') without filter		14:37	0.6	18.0	4.2	0.0	0		
GP23-13 (18.5') with filter		14:42	0.0	14.1	4.8	0.0	0		
GP23-13 (18.5') without filter		14:42	0.0	14.2	4.6	0.0	0		
GP23-13 (18.5') without filter	8/1/2013	14:11	0.0	12.4	5.9	0.0	0	60s - 80s	None
GP23-13 (18.5') with filter		14:11	0.0	12.1	5.4	0.0	0		
GP-7 (8') without filter		14:17	0.0	16.7	3.1	0.0	0		
GP-7 (8') with filter		14:17	0.0	16.4	3.0	0.0	0		
GP-7 (12') without filter		14:17	0.0	13.2	4.7	0.0	0		
GP-7 (12') with filter		14:17	0.0	13.4	4.9	0.0	0		
GP-7 (16') without filter		14:17	0.0	11.4	6.0	0.0	0		
GP-7 (16') with filter		14:17	0.0	11.1	6.1	0.0	0		
GP12-09 (6') without filter		14:30	0.1	7.8	7.3	0.3	6		
GP12-09 (6') with filter		14:30	0.1	8.3	7.8	0.2	4		

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation
GP23-13 (18.5') without filter	8/6/2013	13:56	0.1	12.6	5.4	0.0	0	60s - 80s	None
GP23-13 (18.5') with filter		13:56	0.1	10.4	5.8	0.0	0		
GP-7 (8') without filter		13:40	0.0	16.4	4.7	0.0	0		
GP-7 (8') with filter		13:40	0.0	16.1	4.5	0.0	0		
GP-7 (12') without filter		13:40	0.0	13.1	5.4	0.0	0		
GP-7 (12') with filter		13:40	0.0	13.4	4.9	0.0	0		
GP-7 (16') without filter		13:40	0.0	10.5	6.1	0.0	0		
GP-7 (16') with filter		13:40	0.0	10.6	6.7	0.0	0		
GP12-09 (6') without filter		14:01	0.3	8.7	6.4	0.0	0		
GP12-09 (6') with filter		14:01	0.3	8.9	6.7	0.0	0		
GP12-09 (6') without filter	8/15/2013	13:05	0.0	20.2	1.3	0.0	0	40s - 70s	None
GP12-09 (6') with filter		13:05	0.0	19.8	1.4	0.0	0		
GP23-13 (18.5') without filter		13:11	0.0	11.1	6.7	0.0	0		
GP23-13 (18.5') with filter		13:11	0.0	9.4	6.7	0.0	0		
GP-7 (8') without filter		13:17	0.0	12.8	5.9	0.0	0		
GP-7 (8') with filter		13:17	0.0	14.5	4.6	0.0	0		
GP-7 (12') without filter		13:17	0.0	13.0	4.9	0.0	0		
GP-7 (12') with filter		13:17	0.0	13.4	4.7	0.0	0		
GP-7 (16') without filter		13:17	0.0	9.3	7.6	0.0	0		
GP-7 (16') with filter		13:17	0.0	9.1	6.8	0.0	0		
GP12-09 (6') without filter	8/22/2013	14:21	0.0	0.9	12.0	0.0	0	60s - 80s	Trace (0.06 in.)
GP12-09 (6') with filter		14:21	0.0	0.9	11.6	0.0	0		
GP23-13 (18.5') without filter		14:15	0.0	10.4	6.9	0.0	0		
GP23-13 (18.5') with filter		14:15	0.0	10.6	6.1	0.0	0		
GP-7 (8') without filter		14:26	0.0	10.4	7.0	0.0	0		
GP-7 (8') with filter		14:26	0.0	10.2	6.4	0.0	0		
GP-7 (12') without filter		14:26	0.0	9.5	7.4	0.0	0		
GP-7 (12') with filter		14:26	0.0	9.2	7.2	0.0	0		
GP-7 (16') without filter		14:26	0.0	8.2	7.9	0.0	0		
GP-7 (16') with filter		14:26	0.0	8.4	7.7	0.0	0		
GP12-09 (6') without filter	8/27/2013	13:55	0.3	1.6	11.9	0.0	0	70s - 80s	None
GP12-09 (6') with filter		13:55	0.3	1.5	11.2	0.0	0		
GP23-13 (18.5') without filter		14:01	0.1	10.5	7.5	0.0	0		
GP23-13 (18.5') with filter		14:01	0.1	8.6	8.2	0.0	0		
GP-7 (8') without filter		14:05	0.0	11.1	7.1	0.0	0		
GP-7 (8') with filter		14:05	0.0	10.4	7.3	0.0	0		
GP-7 (12') without filter		14:05	0.1	9.8	7.6	0.0	0		
GP-7 (12') with filter		14:05	0.1	9.2	7.6	0.0	0		
GP-7 (16') without filter		14:05	0.1	8.9	7.8	0.0	0		
GP-7 (16') with filter		14:05	0.1	8.9	7.5	0.0	0		

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation
GP12-09 (6') without filter	9/5/2013	-	0.0	17.9	3.1	0.1	1	50s - 80s	None
GP12-09 (6') with filter		-	0.0	17.5	3.7	0.0	0		
GP23-13 (18.5') without filter		-	0.3	11.3	7.0	0.0	0		
GP23-13 (18.5') with filter		-	0.3	11.7	5.5	0.0	0		
GP-7 (8') without filter		-	0.0	11.0	7.2	0.0	0		
GP-7 (8') with filter		-	0.0	11.3	5.6	0.0	0		
GP-7 (12') without filter		-	0.0	10.3	7.5	0.0	0		
GP-7 (12') with filter		-	0.0	10.6	6.4	0.0	0		
GP-7 (16') without filter		-	0.0	8.4	8.6	0.0	0		
GP-7 (16') with filter		-	0.0	8.4	7.8	0.0	0		
GP23-13 (18.5') without filter	9/12/2013	17:45	0.0	10.4	8.1	0.1	2	60-80s	0.29 inches
GP23-13 (18.5') with filter		17:45	0.0	10.7	6.4	0.1	2		
GP-7 (8') without filter		--	0.0	10.9	7.6	0.0	0		
GP-7 (8') with filter		--	0.0	10.8	7.7	0.0	0		
GP-7 (12') without filter		--	0.1	8.3	9.3	0.0	0		
GP-7 (12') with filter		--	0.1	8.2	9.3	0.0	0		
GP-7 (16') without filter		--	--	7.8	9.3	0.0	0		
GP-7 (16') with filter		--	--	7.9	8.7	0.0	0		
GP-7 (8') without filter	10/17/2013	14:18	0.0	11.5	7.1	0.0	0	40s - 50s	0.1 inches
GP-7 (8') with filter		14:18	0.0	13.5	5.1	0.0	0		
GP-7 (12') without filter		14:23	0.0	11.3	7.0	0.0	0		
GP-7 (12') with filter		14:23	0.0	9.3	8.4	0.0	0		
GP-7 (16') without filter		14:27	0.0	7.9	10.0	0.0	0		
GP-7 (16') with filter		14:27	0.0	8.4	9.3	0.0	0		
GP12-09 (6') without filter		14:14	0.0	17.4	2.4	0.0	0		
GP12-09 (6') with filter		14:14	0.0	17.6	1.5	0.0	0		
GP22-13 (20') without filter		14:31	0.0	0.5	9.7	0.0	0		
GP22-13 (20') with filter		14:31	0.0	1.0	8.9	0.0	0		
GP23-13 (18.5') without filter		14:35	0.0	8.7	10.0	0.0	0		
GP23-13 (18.5') with filter		14:35	0.0	8.2	10.0	0.0	0		
GP24A-13 (20') without filter		14:38	0.0	8.1	10.4	0.0	0		
GP24A-13 (20') without filter		14:38	0.0	10.8	7.9	0.0	0		
GP24B-13 (4.5') without filter		14:42	0.0	11.4	7.2	0.0	0		
GP24B-13 (4.5') with filter		14:42	11.8	5.9	0.0	0.0	0		
GP-7 (8') without filter	11/12/2013	13:00	0.0	14.4	5.5	0.0	0	20s - 30s	Trace (0.05 inches)
GP-7 (8') with filter		13:00	0.0	15.5	4.3	0.0	0		
GP-7 (12') without filter		13:06	0.0	13.7	6.0	0.0	0		
GP-7 (12') with filter		13:06	0.0	13.8	5.5	0.0	0		
GP-7 (16') without filter		13:13	0.0	10.6	8.6	0.0	0		
GP-7 (16') with filter		13:13	0.0	11.7	6.7	0.0	0		
GP12-09 (6') without filter		13:19	0.0	16.1	2.7	0.0	0		
GP12-09 (6') with filter		13:19	0.0	16.8	1.9	0.0	0		
GP23-13 (18.5') without filter		13:25	0.0	10.3	8.2	0.0	0		
GP23-13 (18.5') with filter		13:25	0.0	10.1	7.6	0.0	0		

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation
GP-7	12/19/2013	Buried Under Snow & Ice						30s - 40s	None
GP12-09 (6') without filter		14:54	0.0	19.9	0.8	0.0	0		
GP12-09 (6') with filter		14:54	0.0	19.0	0.4	0.0	0		
GP23-13 (18.5') without filter		14:57	0.0	12.1	8.3	0.0	0		
GP23-13 (18.5') with filter		14:57	0.0	12.4	7.0	0.0	0		
GP-7 (8') without filter	1/9/2014	14:25	0.0	18.5	2.7	0.0	0	20s - 30s	1.55 inches
GP-7 (8') with filter		14:25	0.0	19.0	1.2	0.0	0		
GP-7 (12') without filter		14:30	0.0	18.2	2.8	0.0	0		
GP-7 (12') with filter		14:30	0.0	18.4	1.6	0.0	0		
GP-7 (16') without filter		14:36	0.0	16.2	4.9	0.0	0		
GP-7 (16') with filter		14:36	0.0	16.7	3.9	0.0	0		
GP12-09 (6') without filter		14:20	0.0	12.9	3.6	0.0	0		
GP12-09 (6') with filter		14:20	0.0	12.6	2.9	0.0	0		
GP22-13 (20') without filter		14:00	0.0	8.5	6.3	0.0	0		
GP22-13 (20') with filter		14:00	0.0	15.8	2.5	0.0	0		
GP23-13 (18.5') without filter		14:05	0.0	14.2	6.1	0.0	0		
GP23-13 (18.5') with filter		14:05	0.0	16.8	3.2	0.0	0		
GP24A-13 (20') without filter		14:11	0.0	14.3	5.4	0.0	0		
GP24A-13 (20') with filter		14:11	0.0	17.7	2.8	0.0	0		
GP24B-13 (4.5') without filter		14:16	0.1	16.5	3.1	0.0	0		
GP24B-13 (4.5') with filter		14:16	0.1	15.5	2.7	0.0	0		
GP-7 (8') without filter	3/10/2014	11:17	0.0	19.6	1.8	0.0	0	40s - 50s	None
GP-7 (8') with filter		11:17	0.0	19.9	1.2	0.0	0		
GP-7 (12') without filter		0.0	19.9	1.9	0.0	0			
GP-7 (12') with filter		0.0	20.2	0.6	0.0	0			
GP-7 (16') without filter		0.0	19.8	2.8	0.0	0			
GP-7 (16') with filter		0.0	20.2	1.5	0.0	0			
GP12-09 (6') without filter		11:28	0.0	16.4	6.0	0.0	0		
GP12-09 (6') with filter		11:28	0.0	16.8	5.3	0.0	0		
GP23-13 (18.5') without filter		0.0	21.3	0.4	0.0	0			
GP23-13 (18.5') with filter		0.0	20.8	2.3	0.0	0			
GP-7 (8') without filter	4/2/2014	11:37	0.0	19.2	1.9	0.0	0	50s	Trace (0.15 inches)
GP-7 (8') with filter		11:37	0.0	19.2	1.6	0.0	0		
GP-7 (12') without filter		0.0	18.9	2.8	0.0	0			
GP-7 (12') with filter		0.0	18.8	3.0	0.0	0			
GP-7 (16') without filter		0.0	19.1	2.0	0.0	0			
GP-7 (16') with filter		0.0	19.2	2.3	0.0	0			
GP12-09 (6') without filter		11:50	0.0	21.2	0.3	0.0	0		
GP12-09 (6') with filter		11:50	0.0	21.2	0.5	0.0	0		
GP23-13 (18.5') without filter		11:35	0.0	17.7	3.8	0.0	0		
GP23-13 (18.5') with filter		11:35	0.0	17.6	4.2	0.0	0		

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation
GP-7	5/8/2014 <sup>[1]</sup>	Inaccessible						75-85	None
GP12-09 (6') without filter		15:25	0.0	20.0	0.2	0.0	0		
GP12-09 (6') with filter		15:25	0.0	20.1	0.1	0.0	0		
GP22-13 (20') without filter		15:28	0.1	9.0	4.5	0.0	0		
GP22-13 (20') with filter		15:28	0.1	9.2	3.7	0.0	0		
GP23-13 (18.5') without filter		15:31	0.0	16.9	3.0	0.0	0		
GP23-13 (18.5') with filter		15:31	0.0	16.6	2.1	0.0	0		
GP24A-13 (20') without filter		15:40	0.0	14.7	3.5	0.0	0		
GP24A-13 (20') with filter		15:40	0.0	14.9	2.8	0.0	0		
GP24B-13 (4.5') without filter		15:44	0.0	16.5	3.0	0.0	0		
GP24B-13 (4.5') with filter	15:44	0.0	16.6	2.8	0.0	0			
GP-7	7/17/2014	Inaccessible (unable to located soil gas probe)						70-75	None
GP12-09 (6') without filter		15:37	0.0	19.4	0.7	0.0	0		
GP12-09 (6') with filter		15:37	0.0	19.5	0.3	0.0	0		
GP22-13 (20')		Inaccessible (access restricted by property owner)							
GP23-13 (18.5') without filter		15:41	0.0	13.7	4.3	0.0	0		
GP23-13 (18.5') with filter		15:41	0.0	13.7	4.0	0.0	0		
GP24A-13 (20') without filter		15:44	0.0	12.0	5.5	0.0	0		
GP24A-13 (20') with filter		15:44	0.0	12.1	5.3	0.0	0		
GP24B-13 (4.5') without filter		15:47	0.0	13.0	5.2	0.0	0		
GP24B-13 (4.5') with filter		15:47	0.0	13.1	4.9	0.0	0		
GP-7	8/14/2014	Inaccessible (unable to located soil gas probe)						70-80	None
GP12-09 (6') without filter		14:55	0.0	20.0	0.9	0.0	0.0		
GP12-09 (6') with filter		14:55	0.0	20.1	0.4	0.0	0.0		
GP22-13 (20')		Inaccessible (access restricted by property owner)							
GP23-13 (18.5') without filter		15:00	0.0	13.1	4.9	0.0	0.0		
GP23-13 (18.5') with filter		15:00	0.0	13.2	4.7	0.0	0.0		
GP24A-13 (20') without filter		15:03	0.0	13.2	5.8	0.0	0.0		
GP24A-13 (20') with filter		15:03	0.0	13.3	5.3	0.0	0.0		
GP24B-13 (4.5') without filter		15:06	0.0	15.5	4.8	0.0	0.0		
GP24B-13 (4.5') with filter		15:06	0.0	15.5	4.7	0.0	0.0		
GP-7	8/21/2014	Inaccessible (unable to located soil gas probe)						75-79	1.14 inches
GP12-09 (6') without filter		15:58	0.0	20.0	0.9	0.0	0.0		
GP12-09 (6') with filter		15:58	0.0	20.1	0.5	0.0	0.0		
GP22-13 (20')		Inaccessible (access restricted by property owner)							
GP23-13 (18.5') without filter		16:02	0.0	11.9	6.8	0.0	0.0		
GP23-13 (18.5') with filter		16:02	0.0	12.2	5.8	0.0	0.0		
GP24A-13 (20') without filter		16:05	0.0	13.3	6.2	0.0	0.0		
GP24A-13 (20') with filter		16:05	0.0	13.3	6.0	0.0	0.0		
GP24B-13 (4.5') without filter		16:10	0.0	15.8	5.1	0.0	0.0		
GP24B-13 (4.5') with filter		16:10	0.0	15.7	4.6	0.0	0.0		
GP-7	8/28/2014	Inaccessible (unable to located soil gas probe)						75-80	None
GP12-09 (6') without filter		11:48	0.0	19.7	1.0	0.0	0.0		
GP12-09 (6') with filter		11:48	0.0	19.8	0.4	0.0	0.0		
GP22-13 (20')		Inaccessible (access restricted by property owner)							
GP23-13 (18.5') without filter		11:50	1.0	13.2	6.1	0.0	0.0		
GP23-13 (18.5') with filter		11:50	1.0	13.5	4.5	0.0	0.0		
GP24A-13 (20') without filter		11:55	1.0	14.1	5.4	0.0	0.0		
GP24A-13 (20') with filter		11:55	1.0	15.6	3.6	0.0	0.0		
GP24B-13 (4.5') without filter		12:00	0.0	13.9	6.2	0.0	0.0		
GP24B-13 (4.5') with filter		12:00	0.0	14.0	5.6	0.0	0.0		

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	
GP-7 (8') without filter	9/4/2014	14:25	0.0	14.3	4.6	0.0	0	85-90	None	
GP-7 (8') with filter		14:25	0.0	14.3	4.5	0.0	0			
GP-7 (12') without filter		14:30	0.0	12.0	6.4	0.0	0			
GP-7 (12') with filter		14:30	0.0	21.1	6.6	0.0	0			
GP-7 (16') without filter		14:36	0.0	10.6	7.0	0.0	0			
GP-7 (16') with filter		14:36	0.0	10.6	7.4	0.0	0			
GP12-09 (6') without filter		14:19	0.0	19.2	1.2	0.0	0			
GP12-09 (6') with filter		14:19	0.0	19.1	1.5	0.0	0			
GP22-13 (20')		Inaccessible (access restricted by property owner)								
GP23-13 (18.5') without filter		14:02	0.0	13.1	5.9	0.0	0			
GP23-13 (18.5') with filter		14:02	0.0	13.0	6.2	0.0	0			
GP24A-13 (20') without filter		14:07	0.0	14.2	5.9	0.0	0			
GP24A-13 (20') with filter		14:07	0.0	14.2	5.2	0.0	0			
GP24B-13 (4.5') without filter		14:13	0.0	13.7	5.6	0.0	0			
GP24B-13 (4.5') with filter		14:13	0.0	13.6	5.8	0.0	0			
GP-7 (8') without filter	10/9/2014	13:06	0.2	13.9	5.4	0.0	0	50s	0.3 inches	
GP-7 (8') with filter		13:06	0.2	14.1	5.2	0.0	0			
GP-7 (12') without filter		13:12	0.3	12.2	6.7	0.0	0			
GP-7 (12') with filter		13:12	0.3	12.5	5.8	0.0	0			
GP-7 (16') without filter		13:17	0.6	11.1	7.2	0.0	0			
GP-7 (16') with filter		13:17	0.6	11.0	7.4	0.0	0			
GP12-09 (6') without filter		12:35	0.0	12.3	6.8	0.0	0			
GP12-09 (6') with filter		12:35	0.0	12.5	6.5	0.0	0			
GP22-13 (20') without filter		12:41	0.0	7.9	6.1	0.0	0			
GP22-13 (20') with filter		12:41	0.0	7.8	6.3	0.0	0			
GP23-13 (18.5') without filter		12:48	0.0	13.6	5.7	0.0	0			
GP23-13 (18.5') with filter		12:48	0.0	13.8	6.0	0.0	0			
GP24A-13 (20') without filter		12:54	0.0	15.5	4.4	0.0	0			
GP24A-13 (20') with filter		12:54	0.0	15.8	4.6	0.0	0			
GP24B-13 (4.5') without filter		13:00	0.0	15.3	4.7	0.0	0			
GP24B-13 (4.5') with filter	13:00	0.0	15.3	4.5	0.0	0				
GP-7 (8') without filter	11/26/2014	13:50	0.0	19.6	2.0	0.0	0	30-35	None	
GP-7 (8') with filter		13:50	0.0	19.8	0.8	0.0	0			
GP-7 (12') without filter		13:53	0.0	19.5	2.0	0.0	0			
GP-7 (12') with filter		13:53	0.0	19.8	1.3	0.0	0			
GP-7 (16') without filter		13:55	0.0	18.1	3.4	0.0	0			
GP-7 (16') with filter		13:55	0.0	18.4	1.5	0.0	0			
GP12-09 (6') without filter		13:57	0.0	21.4	2.8	0.0	0			
GP12-09 (6') with filter		13:57	0.0	21.0	2.5	0.0	0			
GP22-13 (20')		Inaccessible (access restricted by property owner)								
GP23-13 (18.5') without filter		13:59	0.0	17.5	3.8	0.0	0			
GP23-13 (18.5') with filter		13:59	0.0	18.6	1.3	0.0	0			
GP24A-13 (20') without filter		14:02	0.0	18.0	3.7	0.0	0			
GP24A-13 (20') with filter		14:02	0.0	20.7	1.8	0.0	0			
GP24B-13 (4.5') without filter		14:04	0.0	19.0	2.6	0.0	0			
GP24B-13 (4.5') with filter		14:04	0.0	20.4	2.3	0.0	0			



Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	
GP-7 (8') without filter	2/6/2015	16:07	0.0	19.4	2.6	0.0	0	25-35	None	
GP-7 (8') with filter		16:07	0.0	19.2	2.4	0.0	0			
GP-7 (12') without filter		16:10	0.0	18.8	3.1	0.0	0			
GP-7 (12') with filter		16:10	0.0	19.1	2.0	0.0	0			
GP-7 (16') without filter		16:13	0.0	19.5	2.2	0.0	0			
GP-7 (16') with filter		16:13	0.0	19.6	1.4	0.0	0			
GP12-09 (6') without filter		16:16	0.0	20.8	1.2	0.0	0			
GP12-09 (6') with filter		16:16	0.0	20.9	1.1	0.0	0			
GP22-13 (20')		Inaccessible (access restricted by property owner)								
GP23-13 (18.5') without filter		16:19	0.0	17.1	4.9	0.0	0			
GP23-13 (18.5') with filter		16:19	0.0	17.0	3.4	0.0	0			
GP24A-13 (20') without filter		16:23	0.0	16.6	4.6	0.0	0			
GP24A-13 (20') with filter		16:23	0.0	18.3	3.0	0.0	0			
GP24B-13 (4.5') without filter		16:26	0.0	17.8	3.2	0.0	0			
GP24B-13 (4.5') with filter		16:26	0.0	17.9	2.4	0.0	0			
GP-7 (8') without filter	5/20/2015	16:14	0.0	17.4	2.8	0.0	0	50-60	None	
GP-7 (8') with filter		16:14	0.0	17.5	2.0	0.0	0			
GP-7 (12') without filter		16:16	0.0	16.7	3.2	0.0	0			
GP-7 (12') with filter		16:16	0.0	16.9	2.8	0.0	0			
GP-7 (16') without filter		16:18		16.7	3.1	0.0	0			
GP-7 (16') with filter		16:18		16.9	2.3	0.0	0			
GP12-09 (6') without filter		16:20	0.0	20.7	0.6	0.0	0			
GP12-09 (6') with filter		16:20	0.0	21.0	0.4	0.0	0			
GP22-13 (20') without filter		16:22	0.0	7.3	6.0	0.0	0			
GP22-13 (20') with filter		16:22	0.0	7.2	5.4	0.0	0			
GP23-13 (18.5') without filter		16:26	0.2	17.5	2.2	0.0	0			
GP23-13 (18.5') with filter		16:26	0.2	17.8	1.8	0.0	0			
GP24A-13 (20') without filter		16:29	0.0	14.9	4.4	0.0	0			
GP24A-13 (20') with filter		16:29	0.0	15.0	3.7	0.0	0			
GP24B-13 (4.5') without filter		16:31	0.0	16.8	3.8	0.0	0			
GP24B-13 (4.5') with filter	16:31	0.0	16.9	2.9	0.0	0				
GP-7 (8') without filter	8/20/2015	14:07	0.0	11.8	6.1	0.0	0	65-70	Trace	
GP-7 (8') with filter		14:07	0.0	13.4	4.6	0.0	0			
GP-7 (12') without filter		14:10	0.0	11.9	6.2	0.0	0			
GP-7 (12') with filter		14:10	0.0	11.5	5.8	0.0	0			
GP-7 (16') without filter		14:13	0.0	11.2	6.1	0.0	0			
GP-7 (16') with filter		14:13	0.0	11.3	5.6	0.0	0			
GP12-09 (6') without filter		14:17	0.0	19.0	1.0	0.0	0			
GP12-09 (6') with filter		14:17	0.0	19.2	0.6	0.0	0			
GP22-13 (20') without filter		14:20	0.0	2.7	7.8	0.0	0			
GP22-13 (20') with filter		14:20	0.0	2.6	7.3	0.0	0			
GP23-13 (18.5') without filter		14:24	0.0	13.8	4.9	0.0	0			
GP23-13 (18.5') with filter		14:24	0.0	13.8	4.8	0.0	0			
GP24A-13 (20') without filter		14:28	0.0	13.4	6.4	0.0	0			
GP24A-13 (20') with filter		14:28	0.0	13.2	6.2	0.0	0			
GP24B-13 (4.5') without filter		14:32	0.0	13.4	6.4	0.0	0			
GP24B-13 (4.5') with filter	14:32	0.0	13.2	6.2	0.0	0				

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation
GP-7 (8') without filter	11/5/2015	14:45	0.0	13.8	4.9	0.0	0	60-70	Trace
GP-7 (8') with filter		14:45	0.0	13.8	3.9	0.0	0		
GP-7 (12') without filter		14:47	0.0	13.2	5.3	0.0	0		
GP-7 (12') with filter		14:47	0.0	13.3	4.6	0.0	0		
GP-7 (16') without filter		14:50	0.0	11.2	7.3	0.0	0		
GP-7 (16') with filter		14:50	0.0	11.4	6.2	0.0	0		
GP12-09 (6') without filter		14:55	0.0	20.1	0.4	0.0	0		
GP12-09 (6') with filter		14:55	0.0	20.2	0.2	0.0	0		
GP22-13 (20') without filter		14:42	0.0	1.6	9.2	0.0	0		
GP22-13 (20') with filter		14:42	0.0	1.4	8.1	0.0	0		
GP23-13 (18.5') without filter		14:38	0.0	11.7	7.5	0.0	0		
GP23-13 (18.5') with filter		14:38	0.0	11.9	6.8	0.0	0		
GP24A-13 (20') without filter		14:30	0.0	11.5	8.0	0.0	0		
GP24A-13 (20') with filter		14:30	0.0	11.7	6.9	0.0	0		
GP24B-13 (4.5') without filter		14:34	0.0	14.2	5.2	0.0	0		
GP24B-13 (4.5') with filter		14:34	0.0	14.3	5.0	0.0	0		
GP-7 (8') without filter	1/28/2016	14:51	0.0	18.2	3.5	0.0	0	35-45	Trace
GP-7 (8') with filter		14:51	0.0	18.6	1.4	0.0	0		
GP-7 (12') without filter		14:55	0.0	18.5	2.9	0.0	0		
GP-7 (12') with filter		14:55	0.0	18.8	2.8	0.0	0		
GP-7 (16') without filter		14:58	0.0	18.8	2.5	0.0	0		
GP-7 (16') with filter		14:58	0.0	18.8	2.2	0.0	0		
GP12-09 (6') without filter		15:00	0.0	18.8	2.3	0.0	0		
GP12-09 (6') with filter		15:00	0.0	20.8	2.1	0.0	0		
GP22-13 (20') without filter		15:03	0.0	4.5	8.5	0.0	0		
GP22-13 (20') with filter		15:03	0.0	3.0	7.8	0.0	0		
GP23-13 (18.5') without filter		15:08	0.0	12.9	7.5	0.0	0		
GP23-13 (18.5') with filter		15:08	0.0	12.9	6.5	0.0	0		
GP24A-13 (20') without filter		15:10	0.0	16.4	4.1	0.0	0		
GP24A-13 (20') with filter		15:10	0.0	17.2	1.9	0.0	0		
GP24B-13 (4.5') without filter		15:13	0.0	13.9	4.7	0.0	0		
GP24B-13 (4.5') with filter		15:13	0.0	14.4	4.2	0.0	0		
GP-7 (8') without filter	7/21/2016	14:37	0.0	12.7	5.8	0.0	0	88-91	None
GP-7 (8') with filter		14:37	0.0	14.1	5.0	0.0	0		
GP-7 (12') without filter		14:40	0.0	12.3	6.0	0.0	0		
GP-7 (12') with filter		14:40	0.0	12.4	5.5	0.0	0		
GP-7 (16') without filter		14:45	0.0	12.4	5.8	0.0	0		
GP-7 (16') with filter		14:45	0.0	12.2	5.4	0.0	0		
GP12-09 (6') without filter		14:48	0.4	19.3	1.0	0.0	0		
GP12-09 (6') with filter		14:48	0.4	19.3	0.8	0.0	0		
GP22-13 (20') without filter		14:52	0.3	6.0	6.2	0.0	0		
GP22-13 (20') with filter		14:52	0.3	5.4	6.1	0.0	0		
GP23-13 (18.5') without filter		14:55	0.4	12.8	6.1	0.0	0		
GP23-13 (18.5') with filter		14:55	0.4	12.9	6.0	0.0	0		
GP24A-13 (20') without filter		14:59	0.0	10.5	7.5	0.0	0		
GP24A-13 (20') with filter		14:59	0.0	10.7	7.2	0.0	0		
GP24B-13 (4.5') without filter		15:04	0.0	13.0	6.9	0.0	0		
GP24B-13 (4.5') with filter		15:04	0.0	12.9	6.7	0.0	0		

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	
GP-7 (8') without filter	7/29/2016	11:00	0.2	12.1	6.1	0.0	0	85-86	None	
GP-7 (8') with filter		11:00	0.2	15.3	3.6	0.0	0			
GP-7 (12') without filter		10:54	0.1	13.8	4.9	0.0	0			
GP-7 (12') with filter		10:54	0.1	12.3	5.8	0.0	0			
GP-7 (16') without filter		11:04	0.0	11.1	6.3	0.0	0			
GP-7 (16') with filter		11:04	0.0	11.5	5.5	0.0	0			
GP12-09 (6') without filter		10:16	1.5	19.3	1.2	0.0	0			
GP12-09 (6') with filter		10:16	1.5	19.6	1.1	0.0	0			
GP22-13 (20') without filter		10:35	48.8	0.3	8.7	0.0	0			
GP22-13 (20') with filter		10:35	48.8	1.0	8.4	0.0	0			
GP23-13 (18.5') without filter		10:02	87.0	12.3	7.2	0.0	0			
GP23-13 (18.5') with filter		10:02	87.0	12.4	6.9	0.0	0			
GP24A-13 (20') without filter		9:51	1081.0	7.1	11.2	0.0	0			
GP24A-13 (20') with filter		9:51	1081.0	8.2	10.4	0.0	0			
GP24B-13 (4.5') without filter		9:56	429.2	13.8	7.2	0.0	0			
GP24B-13 (4.5') with filter		9:56	429.2	13.7	7.3	0.0	0			
GP-7 (8') without filter	8/5/2016	16:53	0.0	11.4	6.3	0.0	0	87-91	None	
GP-7 (8') with filter		16:53	0.0	11.5	6.1	0.0	0			
GP-7 (12') without filter		16:57	0.0	11.0	6.7	0.0	0			
GP-7 (12') with filter		16:57	0.0	11.0	6.4	0.0	0			
GP-7 (16') without filter		17:00		10.5	6.6	0.0	0			
GP-7 (16') with filter		17:00		10.6	6.4	0.0	0			
GP12-09 (6') without filter		16:45	0.0	18.8	1.4	0.0	0			
GP12-09 (6') with filter		16:45	0.0	19.0	1.2	0.0	0			
GP22-13 (20') without filter		15:37	0.0	0.3	8.6	0.0	0			
GP22-13 (20') with filter		15:37	0.0	3.4	6.9	0.0	0			
GP23-13 (18.5') without filter		17:03	0.0	11.4	6.7	0.0	0			
GP23-13 (18.5') with filter		17:03	0.0	12.2	5.9	0.0	0			
GP24A-13 (20') without filter		17:26	0.0	6.2	10.4	0.0	0			
GP24A-13 (20') with filter		17:26	0.0	6.2	10.3	0.0	0			
GP24B-13 (4.5') without filter		17:31	0.0	12.5	6.4	0.0	0			
GP24B-13 (4.5') with filter		17:31	0.0	12.8	6.3	0.0	0			
GP-7 (8') without filter	8/13/2016	11:00	0.0	12.5	6.3	0.0	0	79 - 84	Trace	
GP-7 (8') with filter		11:00	0.0	12.6	6.2	0.0	0			
GP-7 (12') without filter		11:06	0.0	11.7	7.0	0.0	0			
GP-7 (12') with filter		11:06	0.0	11.9	6.7	0.0	0			
GP-7 (16') without filter		11:13	0.0	10.8	7.2	0.0	0			
GP-7 (16') with filter		11:13	0.0	10.9	7.1	0.0	0			
GP12-09 (6') without filter		11:19	0.0	18.4	1.4	0.0	0			
GP12-09 (6') with filter		11:19	0.0	18.5	1.6	0.0	0			
GP22-13 (20') without filter		No access. B&G closed.								
GP22-13 (20') with filter										
GP23-13 (18.5') without filter		10:45	0.0	10.9	7.4	0.0	0			
GP23-13 (18.5') with filter		10:45	0.0	11.1	7.5	0.0	0			
GP24A-13 (20') without filter		10:35	0.2	6.5	11.9	0.0	0			
GP24A-13 (20') with filter		10:35	0.2	6.6	11.8	0.0	0			
GP24B-13 (4.5') without filter		10:25	3.2	12.8	7.3	0.0	0			
GP24B-13 (4.5') with filter		10:25	3.2	13.0	7.2	0.0	0			

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	
GP-7 (8') without filter	8/19/2016	13:01	0.0	11.6	6.2	0.0	0	77-86	None	
GP-7 (8') with filter		13:01	0.0	13.9	5.2	0.0	0			
GP-7 (12') without filter		13:07	0.0	10.7	7.1	0.0	0			
GP-7 (12') with filter		13:07	0.0	10.7	6.6	0.0	0			
GP-7 (16') without filter		13:10	0.0	10.8	7.0	0.0	0			
GP-7 (16') with filter		13:10	0.0	10.8	6.8	0.0	0			
GP12-09 (6') without filter		13:22	0.0	19.2	1.1	0.0	0			
GP12-09 (6') with filter		13:22	0.0	19.1	0.8	0.0	0			
GP22-13 (20') without filter		13:52	0.0	0.6	8.6	0.0	0			
GP22-13 (20') with filter		13:52	0.0	3.4	6.5	0.0	0			
GP23-13 (18.5') without filter		13:27	0.0	10.7	7.5	0.0	0			
GP23-13 (18.5') with filter		13:27	0.0	11.3	6.8	0.0	0			
GP24A-13 (20') without filter		13:38	0.0	10.3	7.6	0.0	0			
GP24A-13 (20') with filter		13:38	0.0	10.4	7.5	0.0	0			
GP24B-13 (4.5') without filter		13:34	0.0	6.7	11.5	0.0	0			
GP24B-13 (4.5') with filter		13:34	0.0	7.8	9.9	0.0	0			
GP-7 (8') without filter	8/23/2016	13:10	0.0	11.5	6.3	0.0	0	75-80	None	
GP-7 (8') with filter		13:10	0.0	11.5	6.4	0.0	0			
GP-7 (12') without filter		13:16	0.0	10.5	7.0	0.0	0			
GP-7 (12') with filter		13:16	0.0	10.4	6.9	0.0	0			
GP-7 (16') without filter		13:25	0.0	9.9	7.0	0.0	0			
GP-7 (16') with filter		13:25	0.0	9.8	6.7	0.0	0			
GP12-09 (6') without filter		12:37	0.0	19.0	1.3	0.0	0			
GP12-09 (6') with filter		12:37	0.0	19.0	1.6	0.0	0			
GP22-13 (20') without filter		12:47	0.0	0.3	8.9	0.0	0			
GP22-13 (20') with filter		12:47	0.0	0.1	8.8	0.0	0			
GP23-13 (18.5') without filter		12:25		9.6	8.8	0.0	0			
GP23-13 (18.5') with filter		12:25		9.7	8.0	0.0	0			
GP24A-13 (20') without filter		12:05	0.0	6.3	12.3	0.0	0			
GP24A-13 (20') with filter		12:05	0.0	6.2	12.3	0.0	0			
GP24B-13 (4.5') without filter		12:13	0.0	9.9	8.1	0.0	0			
GP24B-13 (4.5') with filter		12:13	0.0	9.8	8.1	0.0	0			
GP-7 (8') without filter	8/29/2016	12:34	0.0	11.5	6.8	0.0	0	79-88	None	
GP-7 (8') with filter		12:34	0.0	11.6	6.7	0.0	0			
GP-7 (12') without filter		12:39	0.0	10.4	7.6	0.0	0			
GP-7 (12') with filter		12:39	0.0	10.5	7.5	0.0	0			
GP-7 (16') without filter		12:43	0.0	10.0	7.7	0.0	0			
GP-7 (16') with filter		12:43	0.0	10.1	7.5	0.0	0			
GP12-09 (6') without filter		No Site Access: GHD Lock Removed								
GP12-09 (6') with filter										
GP22-13 (20') without filter		12:58	5.2	0.2	9.6	0.0	0			
GP22-13 (20') with filter		12:58	5.2	0.5	9.4	0.0	0			
GP23-13 (18.5') without filter		12:26	9.0	10.2	7.5	3.4	68			
GP23-13 (18.5') with filter		12:26	9.0	10.3	7.1	3.3	67			
GP24A-13 (20') without filter		12:17	119.5	6.1	11.5	0.0	0			
GP24A-13 (20') with filter		12:17	119.5	6.2	9.4	0.0	0			
GP24B-13 (4.5') without filter		12:11	425.8	11.1	8.4	0.0	0			
GP24B-13 (4.5') with filter		12:11	425.8	11.0	8.4	0.0	0			

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation
GP-7 (8') without filter	9/7/2016	1300 to 1440	0.0	11.6	6.3	0.0	0	75 - 90	None
GP-7 (8') with filter			0.0	11.5	6.4	0.0	0		
GP-7 (12') without filter			0.0	10.0	7.5	0.0	0		
GP-7 (12') with filter			0.0	9.9	7.2	0.0	0		
GP-7 (16') without filter			0.0	9.2	7.5	0.0	0		
GP-7 (16') with filter			0.0	9.0	7.1	0.0	0		
GP12-09 (6') without filter			0.0	19.1	0.7	0.0	0		
GP12-09 (6') with filter			0.0	19.0	0.8	0.0	0		
GP22-13 (20') without filter			0.0	0	9.1	0.0	0		
GP22-13 (20') with filter			0.0	0	9.1	0.0	0		
GP23-13 (18.5') without filter			0.0	9.5	7.8	0.0	0		
GP23-13 (18.5') with filter			0.0	9.5	7.7	0.0	0		
GP24A-13 (20') without filter			0.0	5.2	13.1	0.0	0		
GP24A-13 (20') with filter			0.0	5.1	13.1	0.0	0		
GP24B-13 (4.5') without filter			0.0	11.5	8.0	0.0	0		
GP24B-13 (4.5') with filter			0.0	11.3	8.1	0.0	0		
GP-7 (8') without filter	9/14/2016	1200 to 1340	0.0	11.6	6.2	0.0	0	75 - 85	Trace
GP-7 (8') with filter			0.0	11.5	6.1	0.0	0		
GP-7 (12') without filter			0.0	9.8	7.8	0.0	0		
GP-7 (12') with filter			0.0	9.9	7.7	0.0	0		
GP-7 (16') without filter			0.0	9.5	7.8	0.0	0		
GP-7 (16') with filter			0.0	9.5	7.7	0.0	0		
GP12-09 (6') without filter			0.0	19.2	0.9	0.0	0		
GP12-09 (6') with filter			0.0	19.3	0.8	0.0	0		
GP22-13 (20') without filter			0.0	0.0	9.9	0.0	1		
GP22-13 (20') with filter			0.0	0.0	9.7	0.0	1		
GP23-13 (18.5') without filter			0.0	9.1	8.9	0.0	0		
GP23-13 (18.5') with filter			0.0	9.1	8.8	0.0	0		
GP24A-13 (20') without filter			0.0	5.2	13.1	0.0	0		
GP24A-13 (20') with filter			0.0	5.1	13.0	0.0	0		
GP24B-13 (4.5') without filter			0.0	11.2	8.0	0.0	0		
GP24B-13 (4.5') with filter			0.0	10.8	8.0	0.0	0		
GP-7 (8') without filter	9/20/2016	14:45	0.0	9.6	5.8	0.0	0	72 - 86	None
GP-7 (8') with filter		14:45	0.0	9.5	5.7	0.0	0		
GP-7 (12') without filter		14:52	0.0	8.0	7.4	0.0	0		
GP-7 (12') with filter		14:52	0.0	7.9	7.2	0.0	0		
GP-7 (16') without filter		15:00	0.0	7.5	7.5	0.0	0		
GP-7 (16') with filter		15:00	0.0	7.5	7.2	0.0	0		
GP12-09 (6') without filter		13:51	0.0	19.0	0.7	0.0	0		
GP12-09 (6') with filter		13:51	0.0	19.2	0.5	0.0	0		
GP22-13 (20') without filter		14:00	0.0	0.0	9.7	0.0	0		
GP22-13 (20') with filter		14:00	0.0	0.0	9.6	0.0	0		
GP23-13 (18.5') without filter		13:39	0.0	8.7	8.5	0.0	0		
GP23-13 (18.5') with filter		13:39	0.0	8.7	8.4	0.0	0		
GP24A-13 (20') without filter		13:16	0.0	5.0	13.4	0.0	0		
GP24A-13 (20') with filter		13:16	0.0	4.8	13.5	0.0	0		
GP24B-13 (4.5') without filter		13:25	0.0	11.6	7.1	0.0	0		
GP24B-13 (4.5') with filter		13:25	0.0	11.0	7.3	0.0	0		

Table 3

**Soil Gas Probe Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation
GP-7 (8') without filter	9/28/2016	13:53	0.0	12.9	6.6	0.0	0	50 - 60	1 inch
GP-7 (8') with filter		13:53	0.0	12.5	6.8	0.0	0		
GP-7 (12') without filter		14:00	0.0	10.5	8.7	0.0	0		
GP-7 (12') with filter		14:00	0.0	10.5	8.5	0.0	0		
GP-7 (16') without filter		14:02	0.0	9.6	8.8	0.0	0		
GP-7 (16') with filter		14:02	0.0	9.5	9.0	0.0	0		
GP12-09 (6') without filter		14:10	0.0	20.0	0.9	0.0	0		
GP12-09 (6') with filter		14:10	0.0	20.1	1.1	0.0	0		
GP22-13 (20') without filter		14:31	0.0	0.0	11	0.0	0		
GP22-13 (20') with filter		14:31	0.0	0.0	10.8	0.0	0		
GP23-13 (18.5') without filter		13:27	0.0	9.6	9.7	0.0	0		
GP23-13 (18.5') with filter		13:27	0.0	9.7	9.4	0.0	0		
GP24A-13 (20') without filter		13:09	0.0	13.2	7.3	0.0	0		
GP24A-13 (20') with filter		13:09	0.0	13.1	7.3	0.0	0		
GP24B-13 (4.5') without filter		13:17	0.0	5.1	14.0	0.0	0		
GP24B-13 (4.5') with filter		13:17	0.0	5.1	13.8	0.0	0		
GP-7 (8') without filter	10/7/2016	10:55	0.0	12.2	6.0	0.0	0.0	55 - 79	None
GP-7 (8') with filter		10:55	0.0	12.3	5.9	0.0	0.0		
GP-7 (12') without filter		10:59	0.0	9.9	7.7	0.0	0.0		
GP-7 (12') with filter		10:59	0.0	9.9	7.7	0.0	0.0		
GP-7 (16') without filter		11:03	0.0	8.4	8.4	0.0	0.0		
GP-7 (16') with filter		11:03	0.0	8.5	8.3	0.0	0.0		
GP12-09 (6') without filter		11:30	0.0	20.2	0	0.0	0.0		
GP12-09 (6') with filter		11:30	0.0	19.5	0	0.0	0.0		
GP22-13 (20') without filter		13:05	0.0	0.0	10.5	0.0	0		
GP22-13 (20') with filter		13:05	0.0	10.2	9.6	0.0	0		
GP23-13 (18.5') without filter		10:45	0.0	9.0	9.5	0.0	0.0		
GP23-13 (18.5') with filter		10:45	0.0	9.2	9.0	0.0	0.0		
GP24A-13 (20') without filter		10:34	0.0	9.9	13.8	0.0	0.0		
GP24A-13 (20') with filter		10:34	0.0	10.2	10.7	0.0	0.0		
GP24B-13 (4.5') without filter		10:38	0.0	11.6	7.6	0.0	0.0		
GP24B-13 (4.5') with filter		10:38	0.0	11.7	7.6	0.0	0.0		
GP-7 (8') without filter	10/12/2016	14:42	0.0	13.0	5.5	0.0	0.0	50 - 77	Trace
GP-7 (8') with filter		14:42	0.0	13.1	5.2	0.0	0.0		
GP-7 (12') without filter		14:38	0.0	10.9	7.3	0.0	0.0		
GP-7 (12') with filter		14:38	0.0	11.0	7.0	0.0	0.0		
GP-7 (16') without filter		14:33	0.0	9.0	8.4	0.0	0		
GP-7 (16') with filter		14:33	9.1	8.0	0.0	0.0	0		
GP12-09 (6') without filter		14:52	0.0	19.3	0.5	0.0	0		
GP12-09 (6') with filter		14:52	0.0	19.5	0.1	0.0	0		
GP22-13 (20') without filter		15:12	0.0	0.0	10.7	0.1	2		
GP22-13 (20') with filter		15:12	0.0	0.1	10.3	0.0	0		
GP23-13 (18.5') without filter		14:25	0.0	8.9	9.2	0.0	0		
GP23-13 (18.5') with filter		14:25	0.0	8.9	9.0	0.0	0		
GP24A-13 (20') without filter		14:02	0.0	4.7	14.1	0.0	0		
GP24A-13 (20') with filter		14:02	0.0	4.6	13.9	0.0	0		
GP24B-13 (4.5') without filter		14:15	0.0	16.2	6.8	0.0	0		
GP24B-13 (4.5') with filter		14:15	0.0	15.7	6.8	0.0	0		

## Notes:

<sup>(1)</sup> -CO<sub>2</sub> readings started at 0.1 ppm.

PID - Photoionization Detector

O<sub>2</sub> - Oxygen

CO<sub>2</sub> - Carbon Dioxide

CH<sub>4</sub> - Methane

LEL - Lower Explosive Limit

NM - Not measured

U - Qualified as non-detect due to issues with the filter

Value - Value is greater than LEL for methane (5 percent methane)

Source of weather data for July to October 2016:

[https://www.wunderground.com/history/airport/KDAY/2016/9/28/DailyHistory.html?req\\_city=&req\\_state=&req\\_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=](https://www.wunderground.com/history/airport/KDAY/2016/9/28/DailyHistory.html?req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=)

Table 4

**Summary of Soil Gas Field Screening Values - 2009**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

Sample Location: Sample Date:	GP01-09			GP02-09			GP03-09			GP04-09		
	9/18/2009	10/14/2009	12/10/2009	9/18/2009	10/14/2009	12/10/2009	9/18/2009	10/14/2009	12/10/2009	9/18/2009	10/14/2009	12/10/2009
<b>Parameter</b>												
Methane (%)	28.1	28.4	23.2	19.6	19.8	20.5	0	0	0	7.9	7.8	0.6
Carbon Dioxide (%)	16.5	14.3	11.2	14.2	14.9	16.0	8	5.5	0.8	0.2	0.1	0.1
Oxygen (%)	--	0	0	--	1.3	0	--	12.9	18.7	--	2.2	17.8
Lower Explosive Limit (%)	--	> 100	> 100	--	> 100	> 100	--	0	0	--	> 100	11
Manometer Pressure (inches H <sub>2</sub> O)	--	-5.2	0	--	0	0	--	0	0	--	0	0
PID (ppm)	--	0	0	--	0	0	--	0	0	--	0	0
Barometric Pressure (in. Hg)	29.28	29.3	29.19	29.28	--	29.15	29.28	--	29.15	29.28	29.27	28.64
Balance (%)	--	57.2	65.6	--	63.9	63.5	--	82.2	80.5	--	9	81.5
Ambient Air Temperature (°F)	--	--	19	--	--	17	--	--	17	--	--	32

Table 4

**Summary of Soil Gas Field Screening Values - 2009**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

Sample Location: Sample Date:	9/18/2009	GP05-09 10/14/2009	12/10/2009	9/18/2009	GP06-09 10/14/2009	12/9/2009	9/18/2009	GP07-09 10/14/2009	12/9/2009	9/18/2009	GP08-09 10/14/2009	12/9/2009
<b>Parameter</b>												
Methane (%)	0	0	0	0.1	0	0	0	0	0	0	0	0
Carbon Dioxide (%)	11	11.1	11.3	8.2	6.1	2.5	13.6	12.8	5.1	10.5	9.1	3.9
Oxygen (%)	--	5.3	3.2	--	10.1	16	--	4.4	13.9	--	7.8	16
Lower Explosive Limit (%)	--	0	0	--	0	0	--	0	0	--	0	0
Manometer Pressure (inches H <sub>2</sub> O)	--	0	0	--	0	-1.1	--	0	0	--	0	0
PID (ppm)	--	0	0	--	0	0	--	0	0	--	0	0
Barometric Pressure (in. Hg)	29.28	29.27	29.15	29.28	29.27	28.58	29.28	29.27	28.58	29.28	29.27	28.58
Balance (%)	--	83.6	85.5	--	83.8	81.5	--	82.9	81	--	83	80.1
Ambient Air Temperature (°F)	--	--	17	--	--	35	--	--	35	--	--	35



Table 4

**Summary of Soil Gas Field Screening Values - 2009**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

Sample Location: Sample Date:	9/18/2009	GP09-09 10/14/2009	12/9/2009	9/18/2009	GP10-09 10/14/2009	12/9/2009	9/18/2009	GP11-09 12/9/2009	9/18/2009	GP12-09 10/14/2009	12/10/2009
<b>Parameter</b>											
Methane (%)	0.1	0	0	0.1	0	0	0	0	0.1	0	0
Carbon Dioxide (%)	9.2	8.1	4.4	3.5	3.6	2.4	6.5	1.3	2	2.7	2
Oxygen (%)	--	12.1	13.5	--	0.4	8.3	--	17.8	--	17.9	15.8
Lower Explosive Limit (%)	--	0	0	--	0	0	--	0	--	0	0
Manometer Pressure (inches H <sub>2</sub> O)	--	0	-0.4	--	-0.2	-2	--	0	--	0	0
PID (ppm)	--	0	0	--	0	0	--	0	--	0	0
Barometric Pressure (in. Hg)	29.28	29	28.64	29.28	29	28.64	29.28	28.64	29.31	29.27	29.15
Balance (%)	--	79.8	82.1	--	96	89.3	--	80.9	--	79.4	82.2
Ambient Air Temperature (°F)	--	--	35	--	--	35	--	32	--	--	17

Table 4

**Summary of Soil Gas Field Screening Values - 2009**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

<b>Sample Location:</b>	<b>GP13-09</b>			<b>GP14-09</b>			<b>GP15-09</b>			<b>GP16-09</b>		
<b>Sample Date:</b>	<b>9/18/2009</b>	<b>10/14/2009</b>	<b>12/10/2009</b>	<b>9/18/2009</b>	<b>10/14/2009</b>	<b>12/10/2009</b>	<b>9/18/2009</b>	<b>10/14/2009</b>	<b>12/10/2009</b>	<b>9/18/2009</b>	<b>10/14/2009</b>	<b>12/10/2009</b>
<b>Parameter</b>												
Methane (%)	3.4	3.3	3.7	0	0	0	4.8	2	0	3.7	3.7	4.3
Carbon Dioxide (%)	10.5	10.1	9	9.1	7.2	4.1	8.8	8.5	7.7	5.3	5.3	5.1
Oxygen (%)	--	0.4	0.2	--	8.6	15.2	--	0.6	3.3	--	1	0
Lower Explosive Limit (%)	--	65	73	--	0	0	--	39	0	--	75	85
Manometer Pressure (inches H <sub>2</sub> O)	--	0	0	--	-1	0	--	-1.4	0	--	-1.3	0
PID (ppm)	--	0	0	--	0	0	--	0	1.3	--	0	1.2
Barometric Pressure (in. Hg)	29.28	29.27	29.15	29.28	29.27	29.15	29.28	29.27	29.15	29.28	29.27	29.15
Balance (%)	--	86.3	87.1	--	84.3	80.7	--	89	89	--	90.1	90.6
Ambient Air Temperature (°F)	--	--	17	--	--	17	--	--	17	--	--	17

Table 4

**Summary of Soil Gas Field Screening Values - 2009**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

<b>Sample Location:</b>									
<b>Sample Date:</b>	<b>9/18/2009</b>	<b>GP17-09 10/14/2009</b>	<b>12/10/2009</b>	<b>9/18/2009</b>	<b>GP18-09 10/14/2009</b>	<b>12/10/2009</b>	<b>9/18/2009</b>	<b>GP19-09 10/14/2009</b>	<b>12/10/2009</b>
<b>Parameter</b>									
Methane (%)	1.3	1.7	0.1	26.6	23.1	20.6	0.4	0.2	0.5
Carbon Dioxide (%)	11.9	9.4	5.4	5.1	5.2	4.5	12.2	13.5	11.7
Oxygen (%)	--	0	9.8	--	0	0	--	1	2
Lower Explosive Limit (%)	--	34	1	--	> 100	> 100	--	5	10
Manometer Pressure (inches H <sub>2</sub> O)	--	0.2	0	--	0	0	--	0.2	0
PID (ppm)	--	0	56	--	0	0.7	--	0	3.2
Barometric Pressure (in. Hg)	29.28	29.3	29.19	29.28	29.3	29.19	29.28	29.27	29.19
Balance (%)	--	88.8	84.7	--	71.6	74.9	--	85.1	85.8
Ambient Air Temperature (°F)	--	--	19	--	--	19	--	--	21

Table 4

**Summary of Soil Gas Field Screening Values - 2009**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

<b>Sample Location:</b>	<b>GP20-09</b>			<b>GP21-09</b>		
<b>Sample Date:</b>	<b>9/18/2009</b>	<b>10/14/2009</b>	<b>12/10/2009</b>	<b>9/18/2009</b>	<b>10/14/2009</b>	<b>12/9/2009</b>
<b>Parameter</b>						
Methane (%)	0	0	0	7.1	7.8	2.6
Carbon Dioxide (%)	16.9	14.1	11.9	1.6	1.2	0.3
Oxygen (%)	--	3.1	5	--	0.6	14.1
Lower Explosive Limit (%)	--	0	0	--	> 100	51
Manometer Pressure (inches H <sub>2</sub> O)	--	0	0	--	0	0
PID (ppm)	--	0	1.1	--	0	0
Barometric Pressure (in. Hg)	29.28	29.27	29.19	29.28	29.27	28.64
Balance (%)	--	82.8	83.1	--	90	83
Ambient Air Temperature (°F)	--	--	21	--	--	32

# Appendices

# **Appendix A**

## **Notification of Elevated Methane Levels**

## Chan, Valerie

---

**From:** Hayward, Julian  
**Sent:** Friday, September 09, 2016 10:42 AM  
**To:** Scott Arentsen; Edward N Rizer  
**Cc:** 'Patterson.Leslie@epamail.epa.gov'; 'Steven Renninger'; Madelyn.Adams@epa.ohio.gov; Chan, Valerie  
**Subject:** RE: Notification of elevated methane levels adjacent to Dayton Power and Light, Dryden Road, Moraine, Ohio ~COR-038443-201~  
**Attachments:** 038443Arentsen-Rizer-1-Notification of Elevated Methane Levels.pdf; lab detection summary.pdf

Mr. Arentsen and Mr. Rizer

Further to the notification provided by the attached letter we are providing the analytical results of samples collected from the GP-2 nested probes. The samples were collected at the request of USEPA on August 19, 2016 and analyzed for TO-15 VOCs and methane. See attached detection summary from the lab report which confirms the presence of methane and various VOCs associated with petroleum substances.

Please be advised that the ongoing weekly monitoring at GP-2 continues to show gas readings above the lower explosive limit for methane using field instruments and hence the potential explosion hazard remains, due to the apparent mixture of methane and other VOCs. Also the monitoring results from other nearby probes continues to indicate the potential for a local source in the vicinity of GP-2.

Please let us know if you have any questions.

**Julian Hayward**

**GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)

---

**From:** Chan, Valerie

**Sent:** Tuesday, August 16, 2016 8:43 AM

**To:** Scott Arentsen; Edward N Rizer

**Cc:** 'Patterson.Leslie@epamail.epa.gov'; 'Steven Renninger'; [Madelyn.Adams@epa.ohio.gov](mailto:Madelyn.Adams@epa.ohio.gov); Hayward, Julian; Project Email Filing

**Subject:** Notification of elevated methane levels adjacent to Dayton Power and Light, Dryden Road, Moraine, Ohio ~COR-038443-201~

Hello Mr. Arentsen and Mr. Rizer

Please find attached a letter providing notification of elevated methane levels adjacent to the Dayton Power and Light Company property located at 1900 Dryden Road in Moraine, Ohio.  
Should you have any questions or comments, feel free to contact us.

Thank you,  
Valerie

**Valerie Chan, P.Eng.**

**GHD**

T: 1 519 884 0510 | F: 1 519 884 0525 | E: [valerie.chan@ghd.com](mailto:valerie.chan@ghd.com)  
651 Colby Drive Waterloo Ontario N2V 1C2 Canada | [www.ghd.com](http://www.ghd.com)

[WATER](#) | [ENERGY & RESOURCES](#) | [ENVIRONMENT](#) | [PROPERTY & BUILDINGS](#) | [TRANSPORTATION](#)

Please consider our environment before printing this email

## Chan, Valerie

---

**From:** Hayward, Julian  
**Sent:** Tuesday, September 20, 2016 3:55 PM  
**To:** Nancy Clark; Jacob Elder; Edward N Rizer  
**Cc:** Patterson, Leslie (patterson.leslie@epa.gov); 'Steven Renninger'; Madelyn.Adams@epa.ohio.gov; Chan, Valerie  
**Subject:** Notification of elevated methane levels adjacent to Dayton Power and Light, Dryden Road, Moraine, Ohio ~COR-038443-201~  
**Attachments:** Summary of GP-2 results (20-sept-2016).pdf

Ms. Clark and Mr. Elder,

Further to the notification provided by our letter dated August 16 and the additional laboratory results provided on September 9, please see attached updated table with results of the weekly monitoring at the gas probe location on the east side of Dryden Road, adjacent to the DP&L facility (GP-2).

As shown on the table, GP-2 methane readings remain elevated, i.e., above the lower explosive limit (LEL), as of September 14, 2016.

Please let me know if you have any questions.

**Julian Hayward, P.Eng.**

### **GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)  
651 Colby Drive Waterloo Ontario N2V 1C2 Canada | [www.ghd.com](http://www.ghd.com)

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

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## Chan, Valerie

---

**From:** Hayward, Julian  
**Sent:** Friday, September 30, 2016 12:51 PM  
**To:** Nancy Clark; Jacob Elder; Edward N Rizer  
**Cc:** Patterson, Leslie (patterson.leslie@epa.gov); 'Steven Renninger'; Madelyn.Adams@epa.ohio.gov; Chan, Valerie  
**Subject:** RE: Notification of elevated methane levels adjacent to Dayton Power and Light, Dryden Road, Moraine, Ohio ~COR-038443-201~  
**Attachments:** Summary of GP-2 results (30-sept-2016).pdf

Ms. Clark and Mr. Elder,

See attached updated table with monitoring results. As shown on the table, GP-2 methane readings remain elevated, i.e., above the lower explosive limit (LEL), as of September 28, 2016.

Please let me know if you have any questions.

**Julian Hayward**

**GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)

---

**From:** Hayward, Julian  
**Sent:** Tuesday, September 20, 2016 3:55 PM  
**To:** Nancy Clark; Jacob Elder; 'Edward N Rizer'  
**Cc:** Patterson, Leslie (patterson.leslie@epa.gov); 'Steven Renninger'; Madelyn.Adams@epa.ohio.gov; Chan, Valerie  
**Subject:** Notification of elevated methane levels adjacent to Dayton Power and Light, Dryden Road, Moraine, Ohio ~COR-038443-201~

Ms. Clark and Mr. Elder,

Further to the notification provided by our letter dated August 16 and the additional laboratory results provided on September 9, please see attached updated table with results of the weekly monitoring at the gas probe location on the east side of Dryden Road, adjacent to the DP&L facility (GP-2).

As shown on the table, GP-2 methane readings remain elevated, i.e., above the lower explosive limit (LEL), as of September 14, 2016.

Please let me know if you have any questions.

**Julian Hayward, P.Eng.**

**GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)  
651 Colby Drive Waterloo Ontario N2V 1C2 Canada | [www.ghd.com](http://www.ghd.com)

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## Chan, Valerie

---

**From:** Hayward, Julian  
**Sent:** Friday, October 14, 2016 8:39 AM  
**To:** Nancy Clark; Jacob Elder; Edward N Rizer  
**Cc:** Patterson, Leslie ([patterson.leslie@epa.gov](mailto:patterson.leslie@epa.gov)); 'Steven Renninger';  
Madelyn.Adams@epa.ohio.gov; Chan, Valerie  
**Subject:** RE: Notification of elevated methane levels adjacent to Dayton Power and Light,  
Dryden Road, Moraine, Ohio ~COR-038443-201~  
**Attachments:** Summary of GP-2 results (14-oct-16).pdf

Ms. Clark and Mr. Elder,

See attached updated table with monitoring results. As shown on the table, GP-2 methane readings remain elevated, i.e., above the lower explosive limit (LEL), as of October 12, 2016.

Please let me know if you have any questions.

**Julian Hayward**

**GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)

---

**From:** Hayward, Julian  
**Sent:** Friday, September 30, 2016 12:51 PM  
**To:** 'Nancy Clark'; 'Jacob Elder'; 'Edward N Rizer'  
**Cc:** Patterson, Leslie ([patterson.leslie@epa.gov](mailto:patterson.leslie@epa.gov)); 'Steven Renninger'; 'Madelyn.Adams@epa.ohio.gov'; Chan, Valerie  
**Subject:** RE: Notification of elevated methane levels adjacent to Dayton Power and Light, Dryden Road, Moraine, Ohio ~COR-038443-201~

Ms. Clark and Mr. Elder,

See attached updated table with monitoring results. As shown on the table, GP-2 methane readings remain elevated, i.e., above the lower explosive limit (LEL), as of September 28, 2016.

Please let me know if you have any questions.

**Julian Hayward**

**GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)

---

**From:** Hayward, Julian  
**Sent:** Tuesday, September 20, 2016 3:55 PM  
**To:** Nancy Clark; Jacob Elder; 'Edward N Rizer'  
**Cc:** Patterson, Leslie ([patterson.leslie@epa.gov](mailto:patterson.leslie@epa.gov)); 'Steven Renninger'; [Madelyn.Adams@epa.ohio.gov](mailto:Madelyn.Adams@epa.ohio.gov); Chan, Valerie  
**Subject:** Notification of elevated methane levels adjacent to Dayton Power and Light, Dryden Road, Moraine, Ohio ~COR-038443-201~

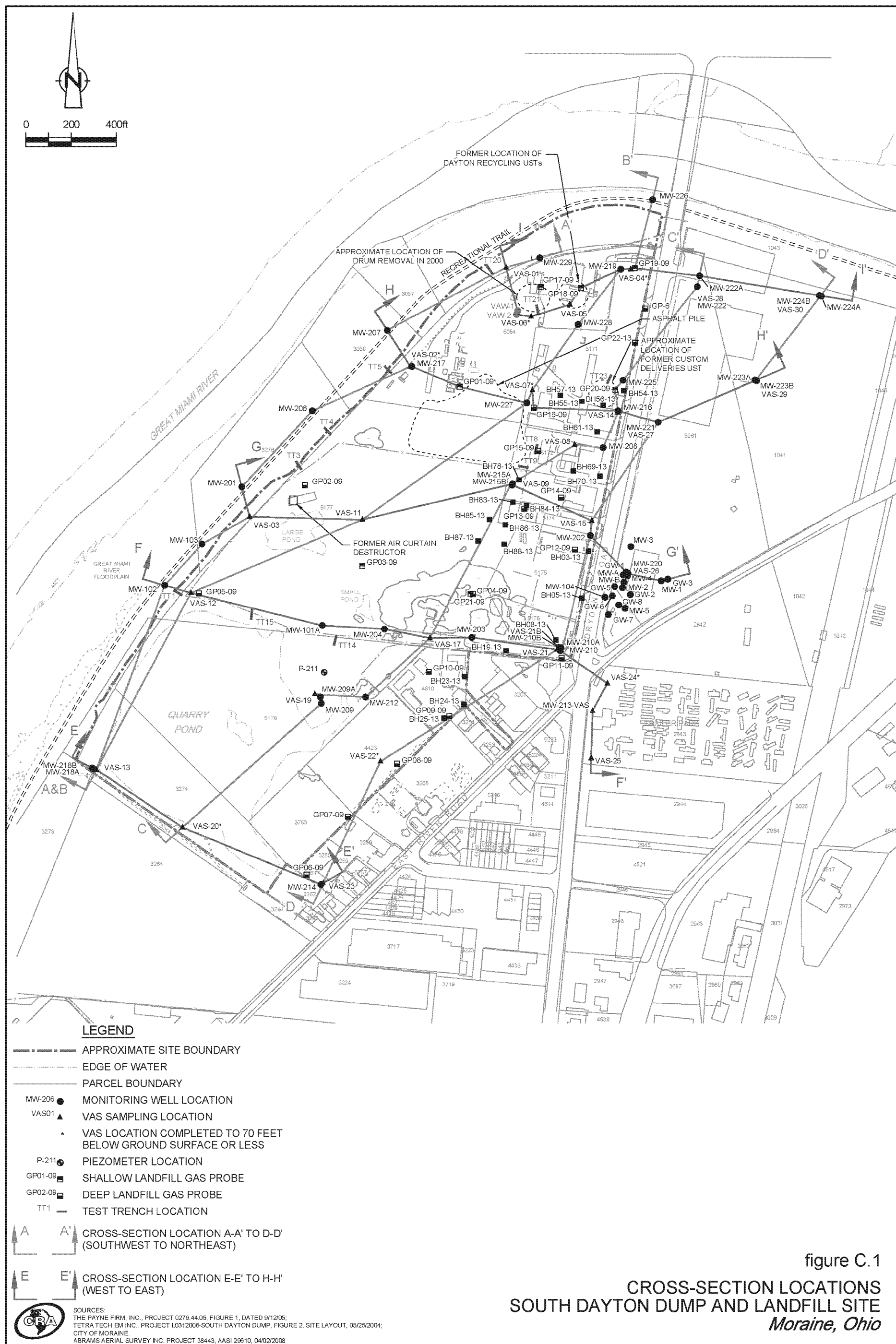
Ms. Clark and Mr. Elder,

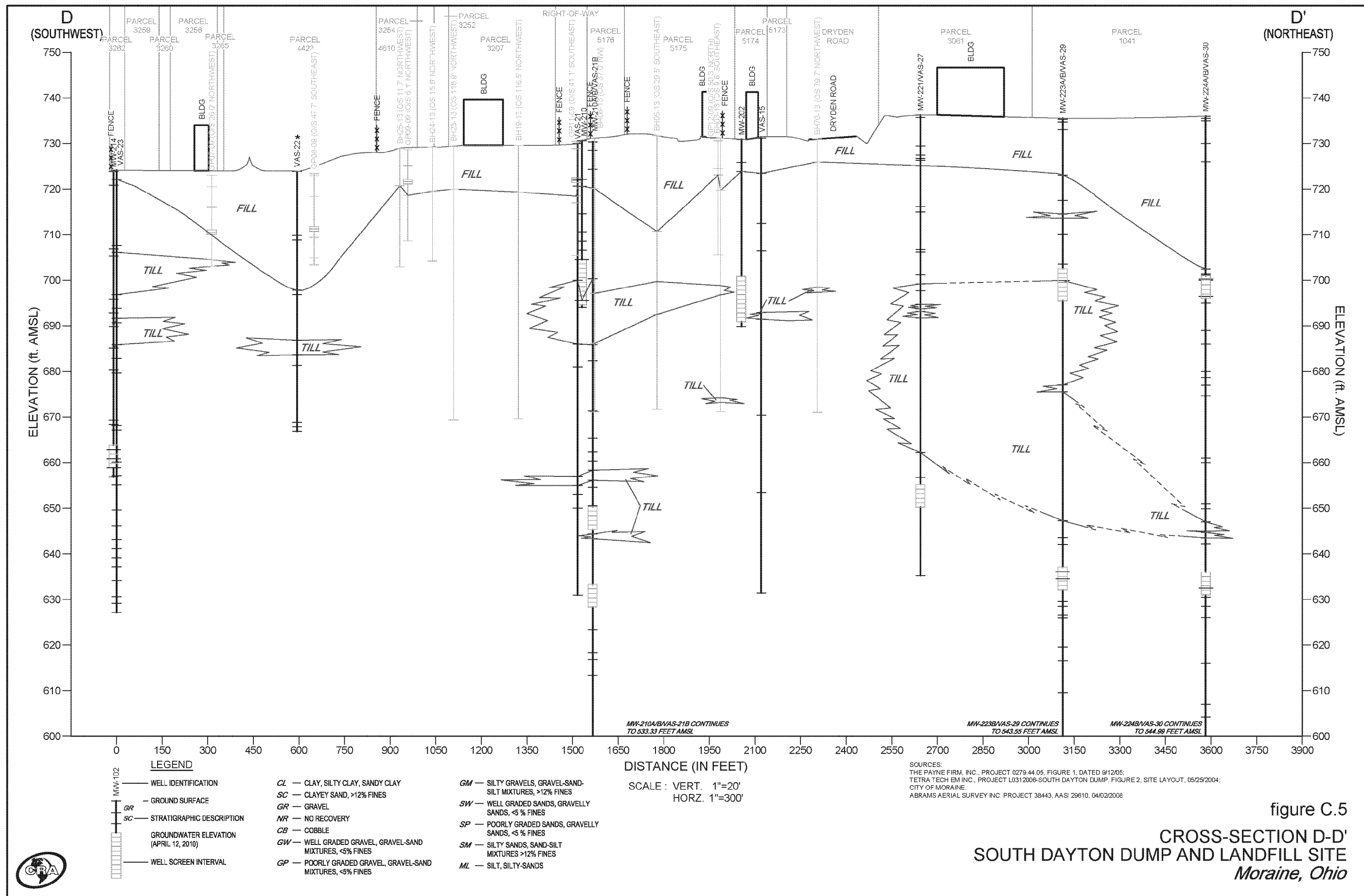
Further to the notification provided by our letter dated August 16 and the additional laboratory results provided on September 9, please see attached updated table with results of the weekly monitoring at the gas probe location on the east side of Dryden Road, adjacent to the DP&L facility (GP-2).

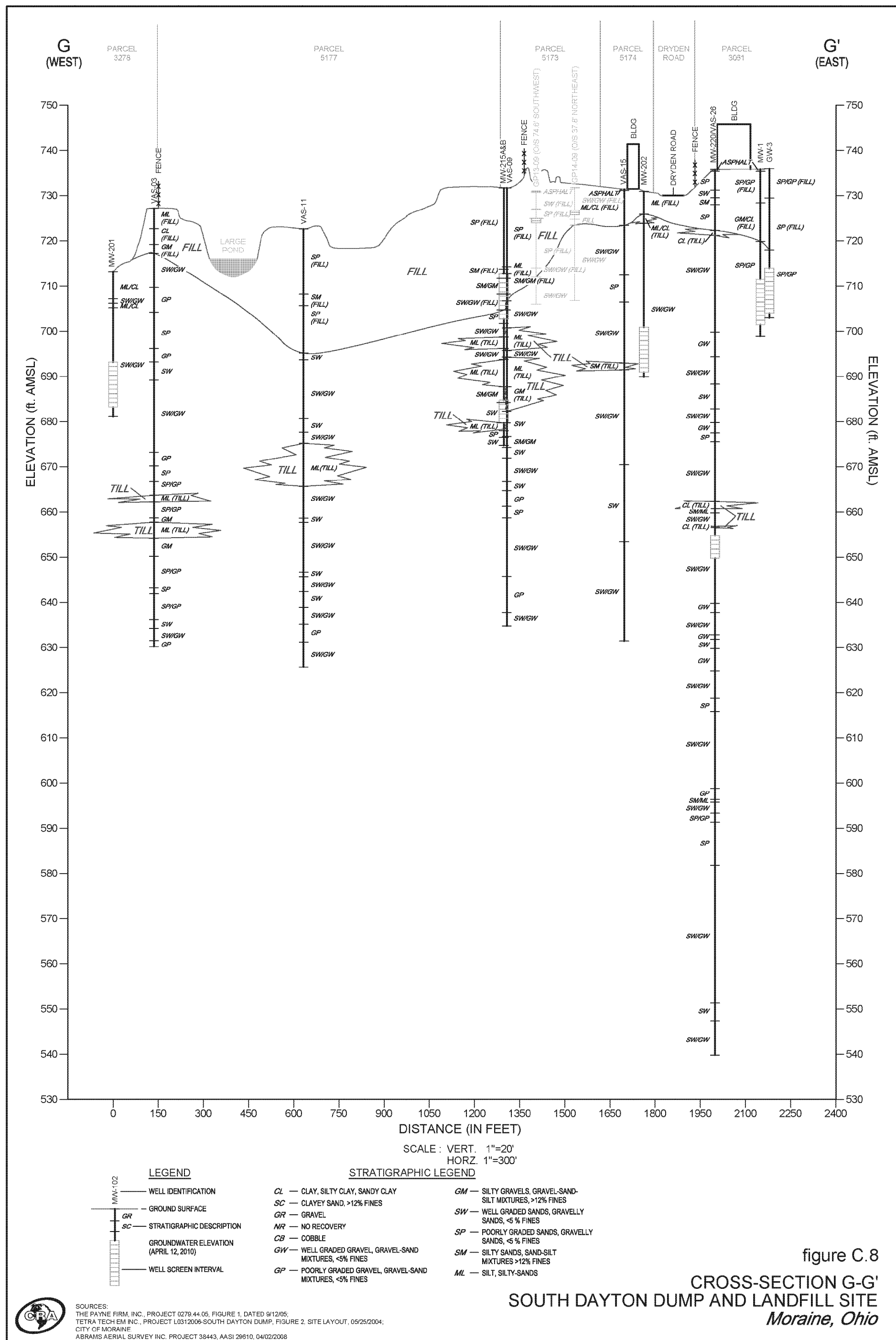
As shown on the table, GP-2 methane readings remain elevated, i.e., above the lower explosive limit (LEL), as of September 14, 2016.

## **Appendix B**

### **Selected Cross-Sections**







# **Appendix C**

## **Dryden Road Buried Utility Information Memorandum**



# Memorandum

September 21, 2016

To: Steve Renninger & Leslie Patterson, USEPA;  
Madelyn Adams, Ohio EPA

Ref. No.: 038443-201

From: Julian Hayward/Valerie Chan/cb/37

CC: Ken Brown, ITW; Jim Campbell, EMI, Wendell Barner;  
Barner Consulting; Bryan Heath, NCR

**Subject: Dryden Road Buried Utility Information**

United States Environmental Protection Agency (USEPA), GHD, and the Respondents to the Administrative Settlement Agreement Order on Consent for Removal Action Docket No. V-W-13-C-010 (Respondents) participated in conference calls regarding the elevated levels of methane detected seasonally from soil gas probe GP-2. GP-2 is located on the east side of Dryden Road in Moraine, Ohio, adjacent to the Dayton Power and Light property at 1900 Dryden Road, as shown on Figure 1.

GHD notes that the soil gas monitoring at probes in the vicinity of GP-2 on the west side of Dryden Road shows the general absence of methane. The gas present at GP-2 has been confirmed to be a mixture of methane and petroleum-related substances. On this basis a local source in the area of GP-2 appears to be causing the elevated readings at GP-2. Information regarding buried utilities has been collected to examine the possibility of preferential gas migration pathways as outlined in this memo.

Based on the conference call discussions, GHD completed the following:

- Provided notification of the potential explosive hazard to Dayton Power and Light (DP&L) and the City of Moraine, on August 16, 2016.
- Contacted the City of Moraine to request information regarding buried utilities, and was directed to Ohio Utilities Protection Services (OUPS), on August 24, 2016.
- Contacted OUPS on August 24, 2016. OUPS issued Ticket A623702683-00A on the same date.
- Completed sampling from and third-party laboratory analysis of GP-2 soil gas for TO-15 and methane, the results of which were provided to DP&L and City of Moraine on September 9, 2016.

OUPS member Montgomery County provided copies of various drawings (Attachment 1) with information on the following utility types, sanitary sewer, water mains, and natural gas lines. Underground utility information from remaining OUPS members (AT&T, Cincinnati Bell, Centurylink, Level 3 Communication, etc.) is presented in Attachment 2. The information from OUPS did not provide specific details for storm sewers. GHD contacted Miami Conservancy District, Montgomery County, and the City of Moraine to request said information but none was available. GHD made observations of storm drains and other features during a site visit on September 14, 2016 in conjunction with weekly soil gas monitoring.





Based on the OUPS documents, GHD and Respondents understand the locations of buried utilities are as follows:

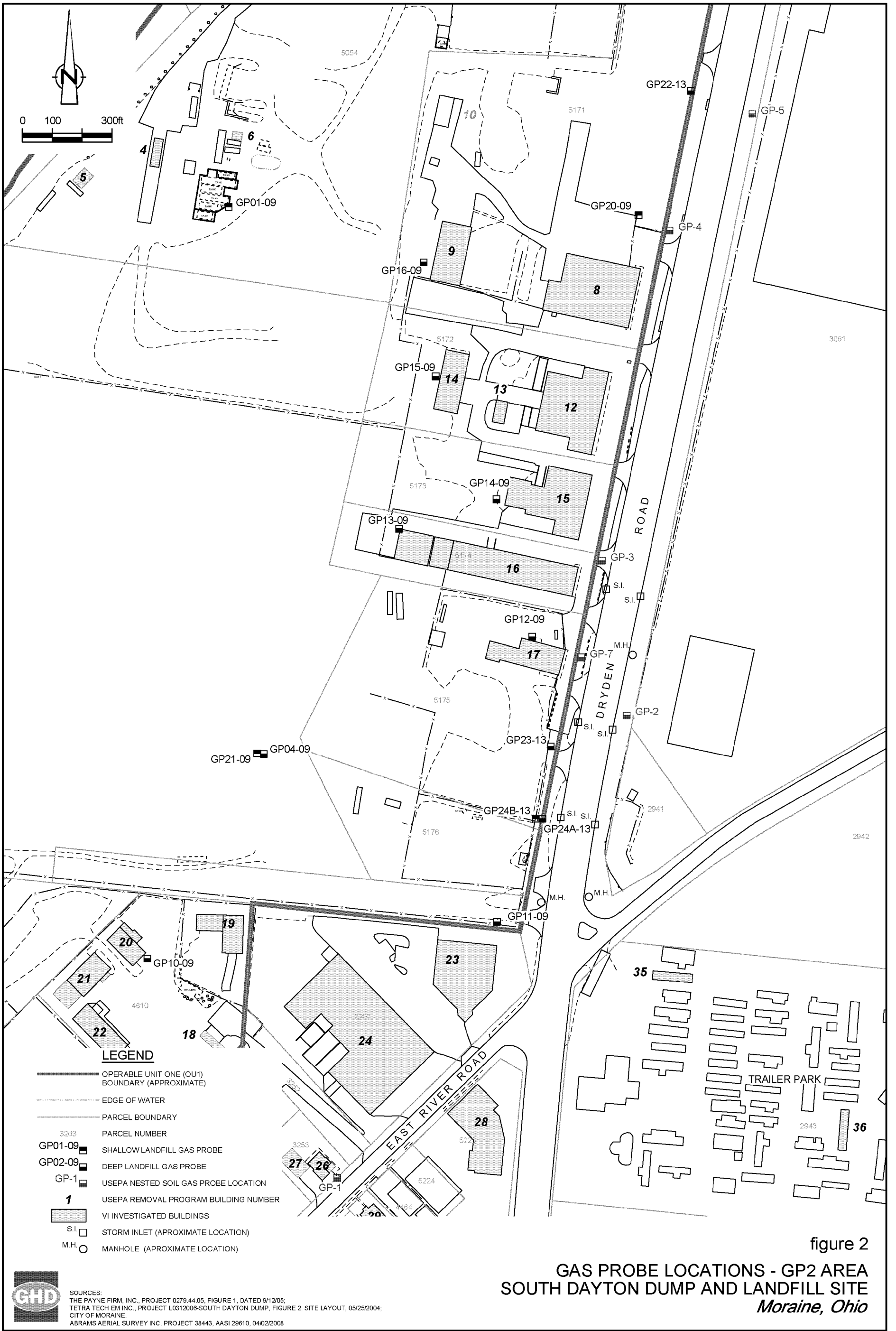
- On the west side of Dryden Road (i.e., adjacent to the South Dayton Dump and Landfill Site [Site]), buried utilities include an 8" or 10" water main, 4" gas line, and 10" sanitary sewer.
- An underground duct (Ohio Bell Telephone) is located slightly west of the centerline of Dryden Road (also known as Springboro Pike).
- There is one buried utility shown on the drawings which crosses over Dryden Road, which is a 6" Gas line that is located slightly south of the south end bridge (i.e., from the Valley Asphalt property) which connects to a 12" gas line on the DP&L property.
- With the exception of Cincinnati Bell, no underground utilities are shown on the east side of Dryden Road, adjacent to the DP&L property, north from East River Road until the 12" gas line described above.

As noted above, the drawings provided by OUPS do not provide storm sewer details. Some of the drawings make limited references to storm sewer piping. GHD conducted an inspection on September 14, 2016, and noted the presence of storm inlets and other features - see Figure 2. The manhole shown in the area of GP-2 is believed to be associated with Cincinnati Bell.

Soil stratigraphy in the area along the west side of Dryden Road is provided by borehole information logged by GHD (formerly Conestoga-Rovers & Associates, CRA). Borehole locations and stratigraphy logs are presented in Attachment 3. Stratigraphy logs for the soil gas probes (GP-1 to GP-7) installed along Dryden Road by USEPA contractor Weston / Dynamac are not available. GP-2 is screened at two depths, 12 and 16 feet below ground surface (ft bgs). In Site area soil gas probes, that interval is characterized by permeable, loose, medium to coarse sand and/or gravel.

The buried utility information for Dryden Road, spanning north from East River Road to Nicolas Road in Moraine Ohio, is presented in the following attachments. The locations of the buried utilities have been summarized above. Based on available information the apparent storm sewer inlets along Dryden Road require further assessment to determine possible interconnection. Otherwise the available information does not indicate the presence of buried utilities crossing Dryden Road that would represent plausible gas migration pathways. Should you have any questions or comments, feel free to contact us.

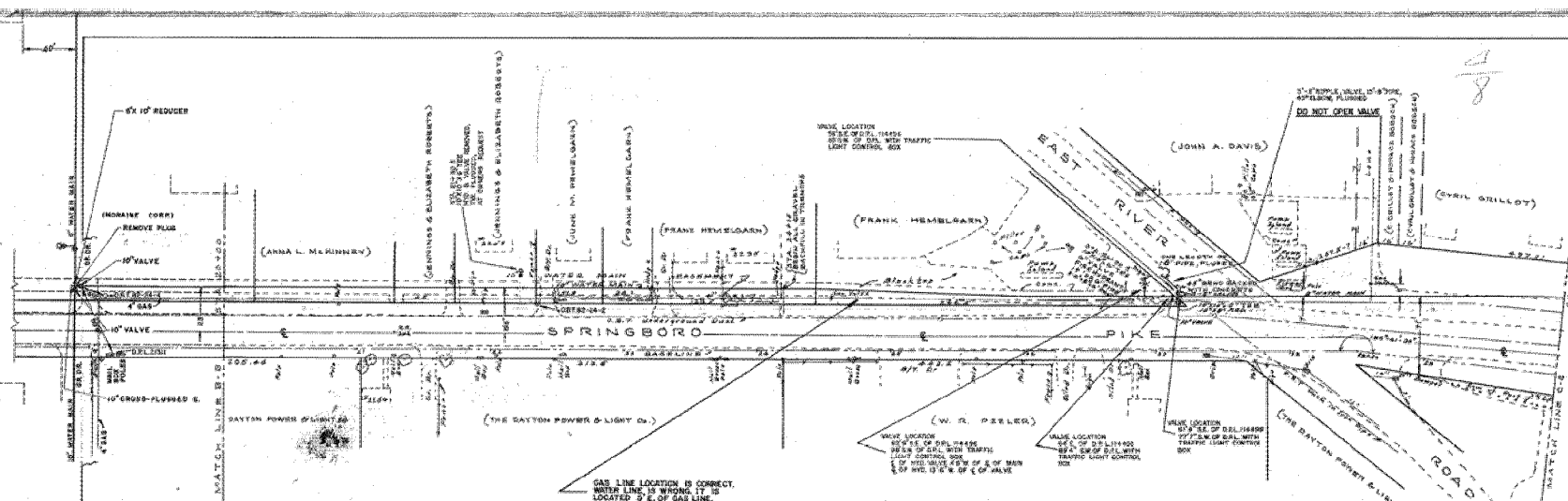




## **Attachment 1**

[illegible]

63-1520  
633-1517

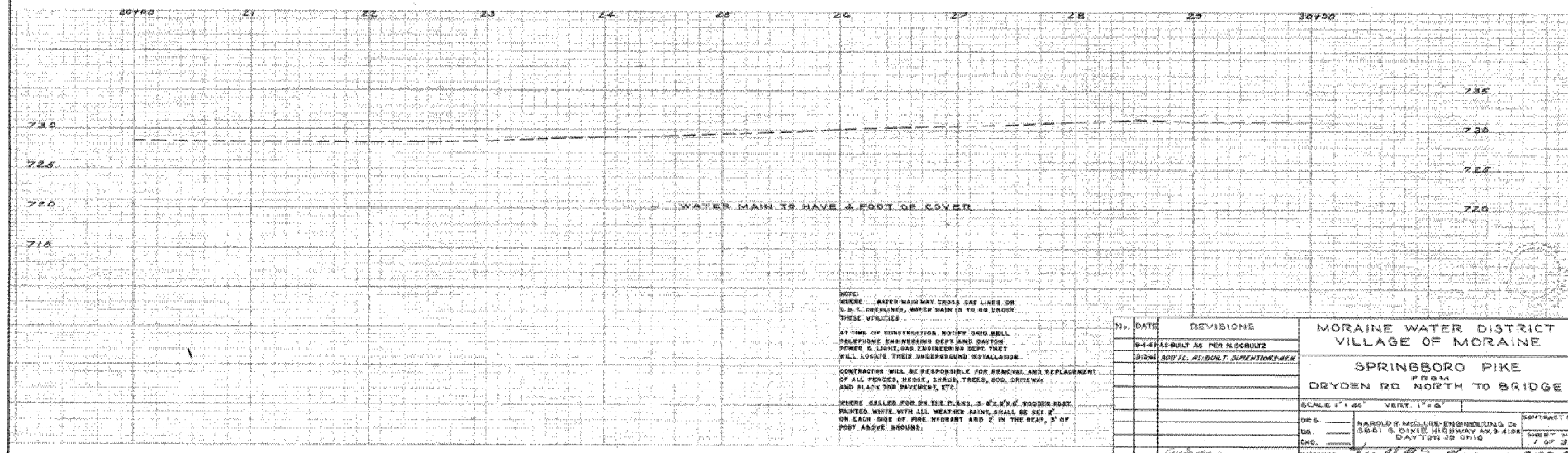


APPROVED BY BOARD  
OF COUNTY  
COMMISSIONERS

CLERK: Jane Guerrero  
L.A. Huffman  
COUNTY SANITARY ENGINEER

DATE 2-14-61  
DATE 2-14-61

WATER LINE NOT TO SCALE



NOTE: WHERE WATER MAIN MAY CROSS GAS LINES OR S.D.T. PUEBLO, WATER MAIN IS TO GO UNDER THESE UTILITIES.

AT TIME OF CONSTRUCTION NOTIFY OHIO BELL  
TELEPHONE ENGINEERING DEPT AND DAYTON  
POWER & LIGHT, GAS ENGINEERING DEPT THEY  
WILL LOCATE THEIR UNDERGROUND INSTALLATIONS

CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT  
OF ALL FENCES, HEDGES, SHRUBS, TREES, SOIL, DRIVEWAY

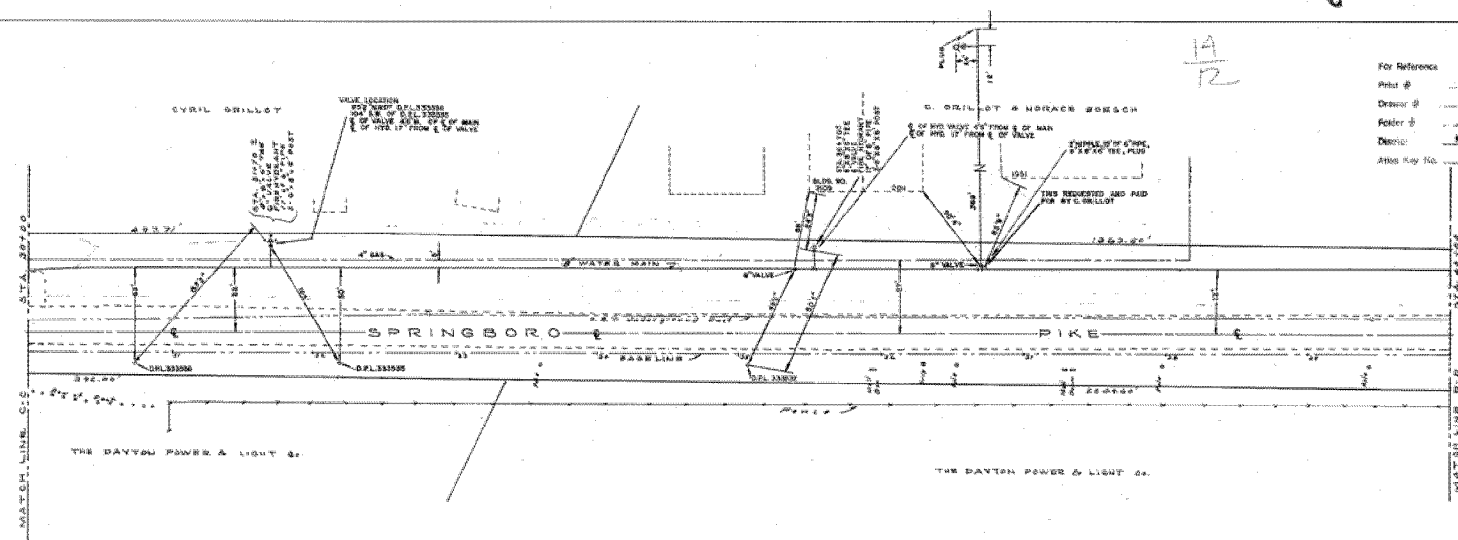
WHERE CALLED FOR ON THE PLANS, 3'-6" X 2'-0" WOODEN POSTS  
PAINTED WHITE WITH ALL WEATHER PAINT, SHALL BE SET 2'-0"  
ON EACH SIDE OF FIRE HYDRANT AND 2' IN THE REAR, 3' ON  
POST ABOVE GROUND.

No.	DATE	REVISION	MORaine WATER DISTRICT VILLAGE OF MORaine  SPRINGBORO PIKE FROM DRYDEN RD. NORTH TO BRIDGE  SCALE 1" = 40'      VERT. 1" = 5'  DES.      HAROLD MCCLURE, ENGINEERING CO. US.      3661 S. DIXIE HIGHWAY, APT. 3, AIDE CAD.      DAYTON, OH 45416  SHEET # 1 OF 2
9-1-81		AS-BUILT AS PER R. SCHULTZ	
9-16-		ADDT. AS-BUILT DIMENSIONS PER	

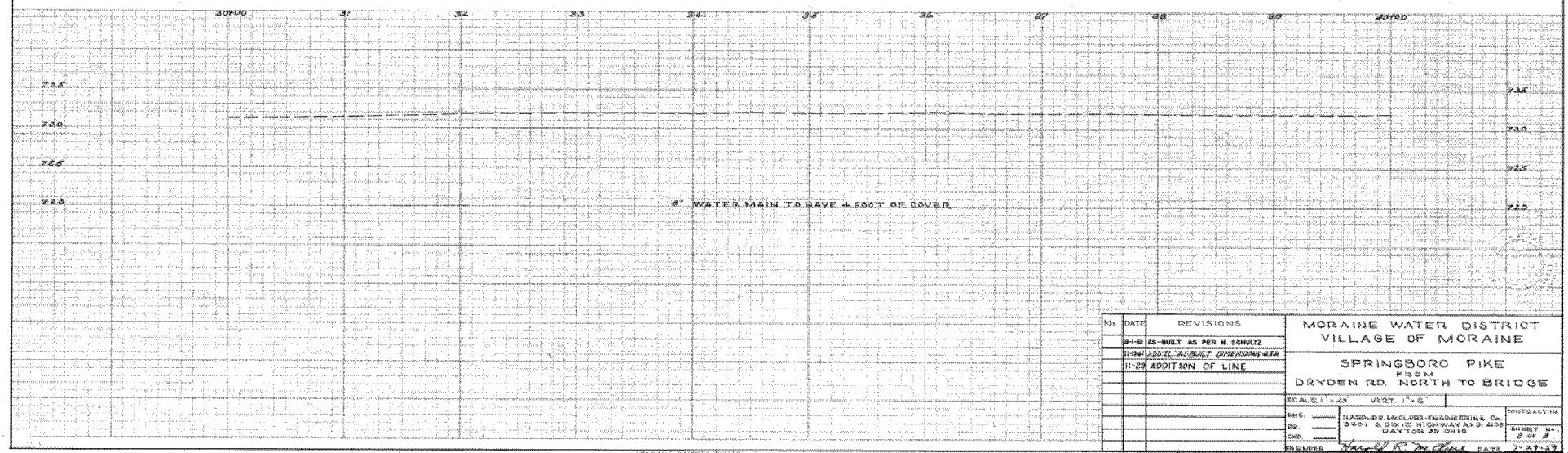


For Reference  
 Plot #  
 Drawn #  
 Folder #  
 Dated:  
 Area Map No. 157

Sheet No. 639  
 1520  
 COORDINATE NO.  
 639-1517  
 FINAL  
 COORDINATE  
 W 72

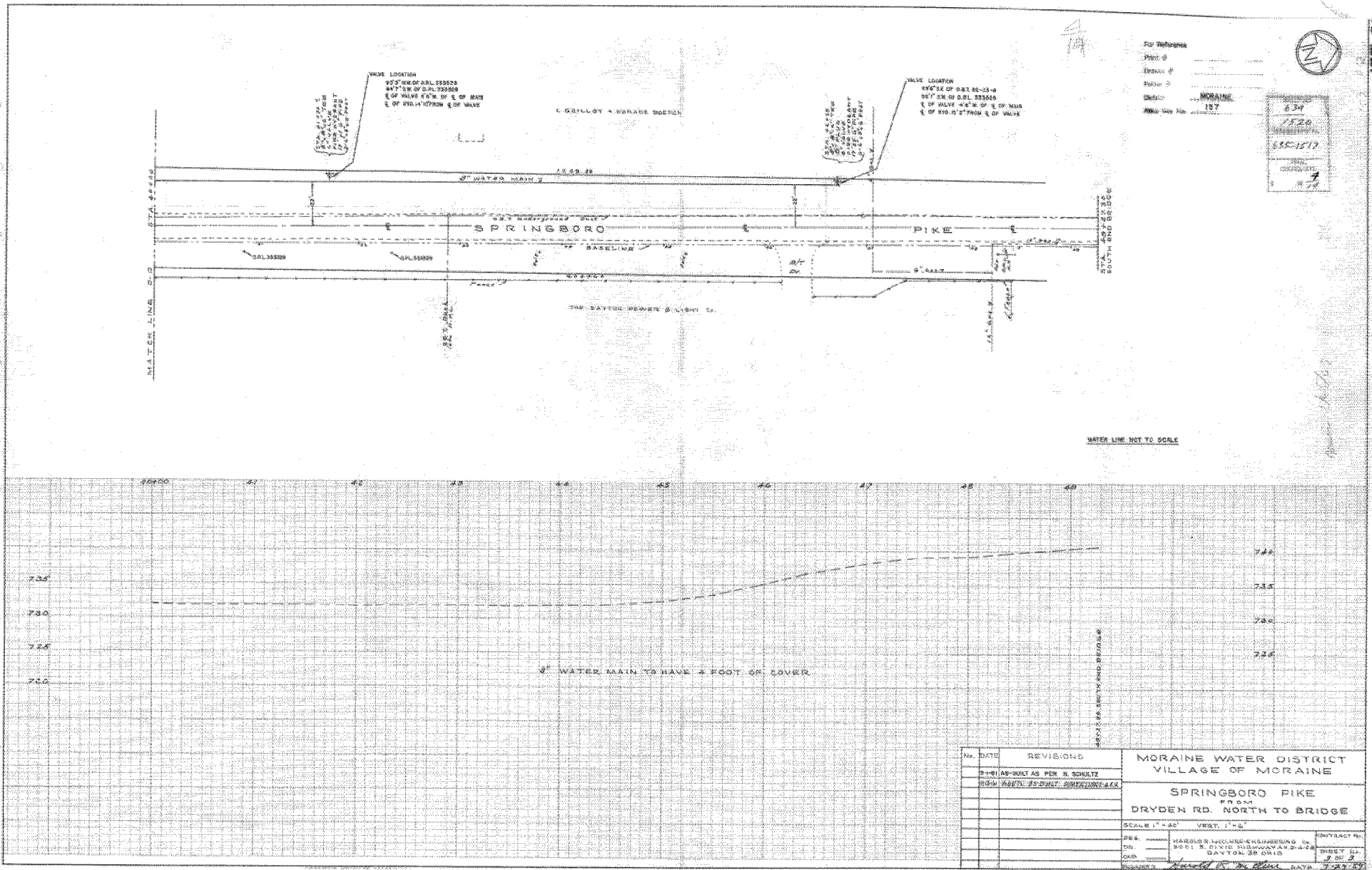


WATER LINE NOT TO SCALE



REVISIONS		MORaine WATER DISTRICT VILLAGE OF MORaine	
No.	DATE		
9-1-28	AS-BUILT AS PER H. SCHULTZ	SPRINGBORO PIKE FROM DRYDEN RD. NORTH TO BRIDGE	
10-24-28	ADD. 7" AS-BUILT EXPOSED JOINTS W/ 4" R		
11-28	ADDITION OF LINE		
		SCALE: 1" = 25'	VERT. 1" = 5'
DES. _____		CONTACT IN _____	
PR. _____		SHEET NO. _____	
CHK. _____		OF _____	
DRAWN BY _____		DATE: 7-27-51	

SCALE: 1" = 25' VERT. 1" = 5'  
 DES. HATFIELD & MCGRAW-ENGINEERING Co.  
 3001 S. DIVISION HIGHWAY A-3, 410E  
 DAYTON 39 OHIO  
 SHEET No. 639  
 DATED 7-27-27









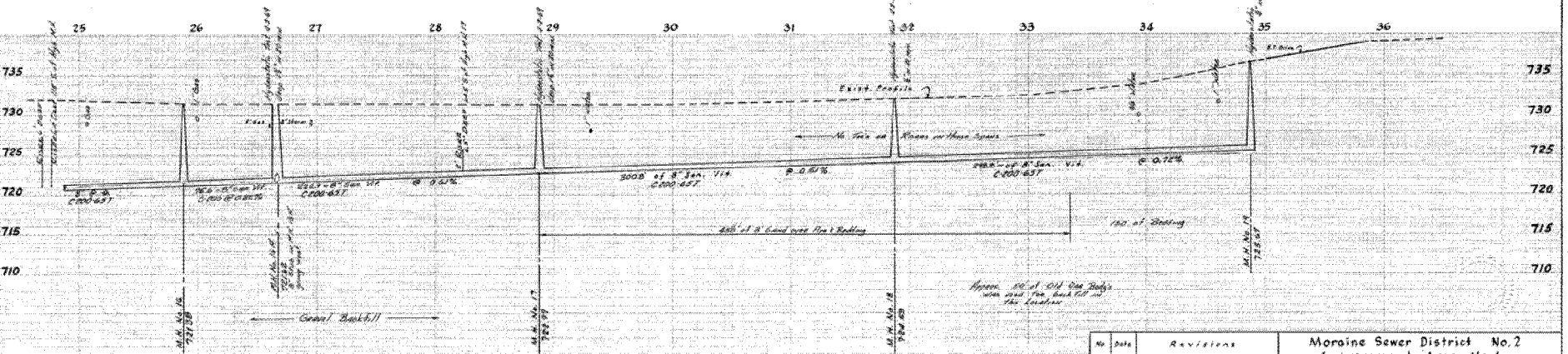
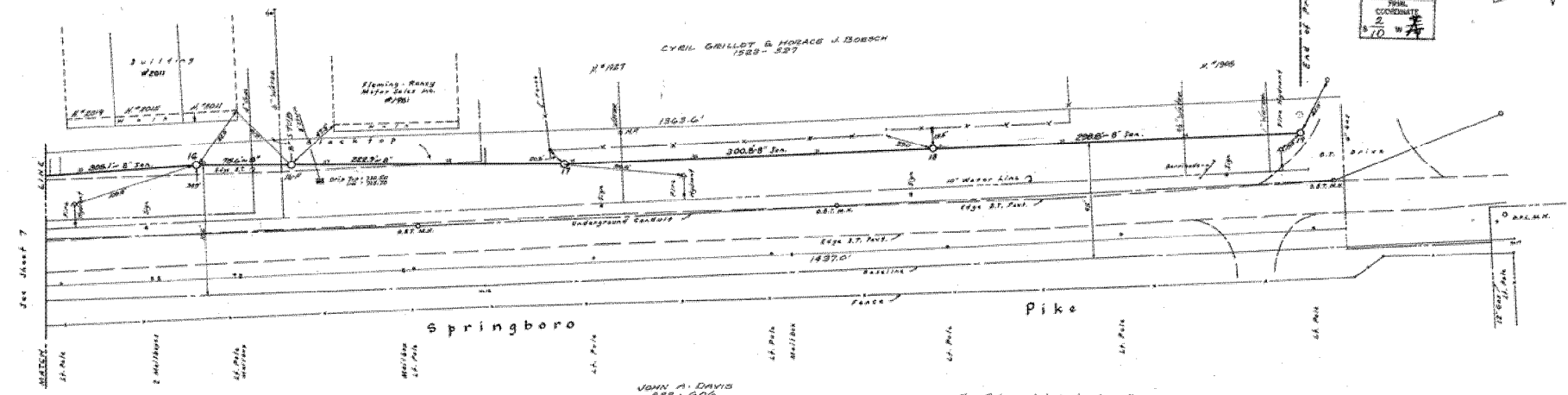
5-2  
10

W 2  
14

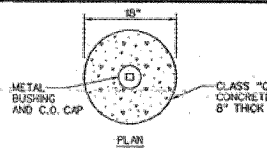
SHEET NO.  
634  
COORDINATE NO.  
635-1517  
PANEL  
COORDINATE  
2  
10 W 14



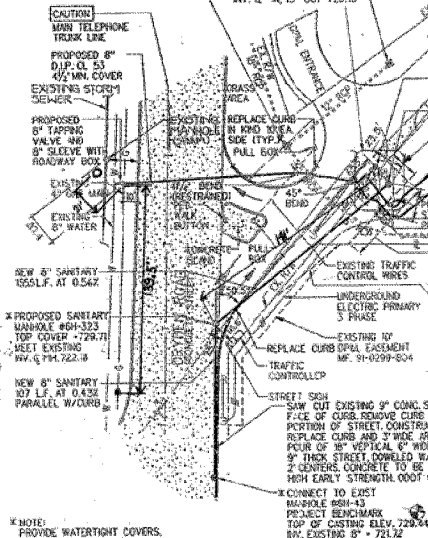
157-014



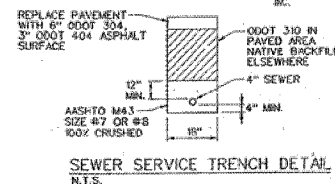
No.	Date	Revisions	Moraine Sewer District No. 2 Improvement Area No. 1 Village of Moraine " Montgomery Co., Ohio  <b>Sanitary Sewer</b> <b>Springboro Pike</b>  McClure Engineering Company 3601 South Dixie Hwy. 293-1108 Dayton, Ohio 45439  Engineer: <i>Walter E. McQuinn</i> Date: 4-8-62 Scale: 1"=80'
1	10-20-60	CHANGED SINKER BRIDGE	
2	10-20-60	CHANGED SINKER BRIDGE	
3	11-1-61	AS SHOWN	
4	1-10-62	AS SHOWN	
Bench Mark No. _____			
Approved by: _____ Date: _____ Drawing No. _____			



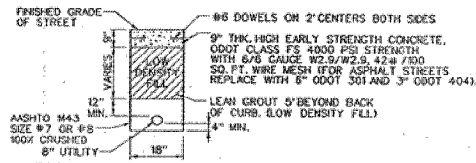
STANDARD CLEAN-OUT DETAIL  
N.T.S.



SEWER SERVICE TRENCH DETAIL  
N.T.S.



NOTE: FOR PUBLIC MAIN EXTENSIONS THAT ARE OUTSIDE THE STREET, FROM 1' OVER THE THE PIPE ODOT 310 MAY BE USED AS BACKFILL MATERIAL, THEN TOPPED W/NATIVE TOPSOIL.



TRENCH DETAIL WITHIN STREET  
PUBLIC SEWER MAIN EXTENSION  
AND  
PUBLIC WATER MAIN EXTENSION  
N.T.S.

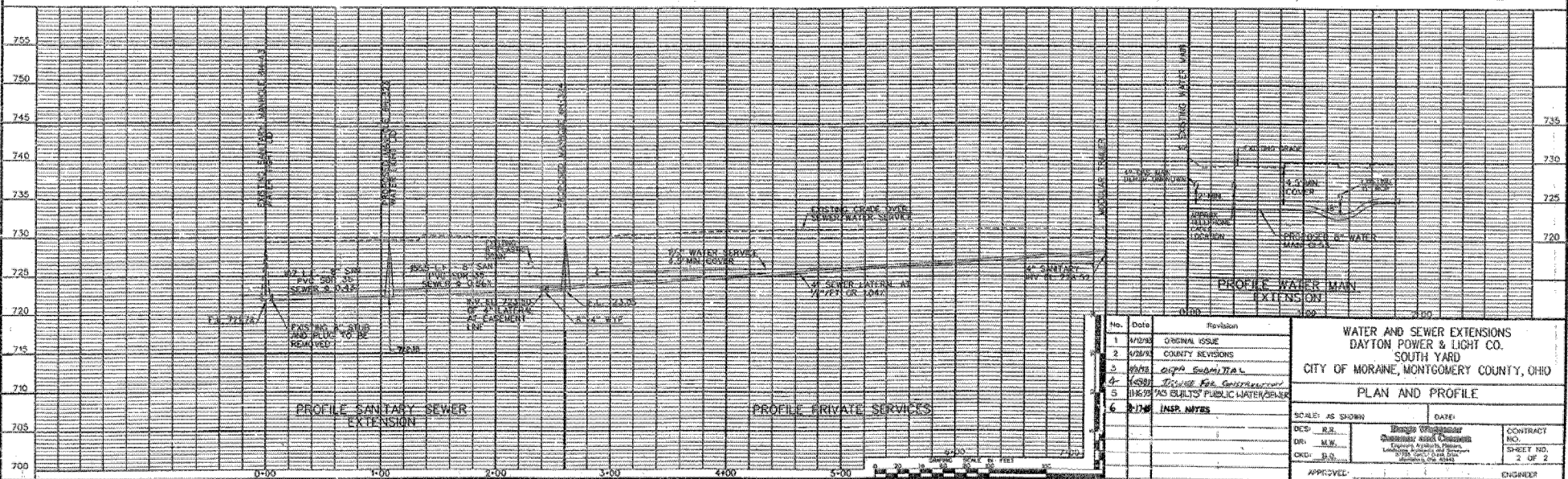
# GENERAL NOTES:

1. WHEN CONSTRUCTING SERVICE LATERALS ACROSS DP & L PROPERTY (GRAVEL AREA) THE EXISTING GRAVEL BASE MATERIAL SHALL BE SALVAGED AND RE-USED AT THE COMPLETION OF THE BACKFILLING OPERATIONS.
2. CONTRACTOR TO MAINTAIN TRAFFIC WHILE PERFORMING WORK IN THE R/W PER THE REQUIREMENTS OF CITY OF MORANE.
3. ALL CONCRETE AND EXCESS MATERIAL GENERATED BY THIS PROJECT SHALL BE HAULED OFF SITE AND DISPOSED OF PROPERLY.
4. WHEN CROSSING DRYDEN ROAD IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE THE EXISTING CONCRETE TO THE NEAREST CONTROL JOINT AND BY PLATING, DIVERSION AND FLAGMEN TRAFFIC MUST BE MAINTAINED.
5. ALL STREETS, CURBS, TRAFFIC CONTROL DEVICES ETC. ARE THE SOLE PROPERTY OF THE CITY OF MORANE.
6. IF ASSISTANCE IN HOLDING UTILITY POLES DURING SANITARY SEWER INSTALLATION IS REQUIRED, CONTACT DP & L CO. PERSONNEL AT SOUTH YARD.
7. ALL PAVED AREAS TO BE SAW CUT PRIOR TO REMOVAL.
8. SANITARY SEWER LATERAL TO BE TESTED AT 5 P.S.I. OR TEN FEET OF HEAD PRIOR TO FINAL CONNECTION.

SHEET NO. 634/520  
COORDINATE NO. 633/517  
DATE 8/12/12



BENCHMARK: TOP OF CASTING OF SANITARY MANHOLE ELEVATION = 729.44



No.	Date	Revision
1	10/0/0	ORIGINAL ISSUE
2	10/0/0	COUNTY REVISIONS
3	10/0/0	ADDITIONAL SUBMITTALS
4	10/0/0	REVISION FOR CONSTRUCTION
5	10/0/0	ADDITIONAL PUBLIC WATER/SEWER
6	10/0/0	INSPECTION NOTES

WATER AND SEWER EXTENSIONS  
DAYTON POWER & LIGHT CO.  
SOUTH YARD  
CITY OF MORANE, MONTGOMERY COUNTY, OHIO

PLAN AND PROFILE

SCALE: AS SHOWN DATE: 8/12/12

DESIGNED BY: [Signature] CHECKED BY: [Signature] CONTRACT NO. [Blank]

DRAWN BY: [Signature] IN CHARGE: [Signature] SHEET NO. 2 OF 2

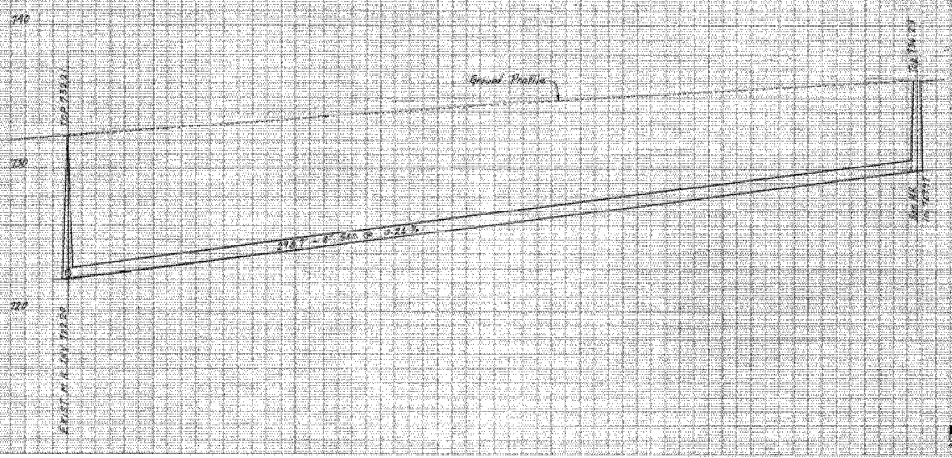
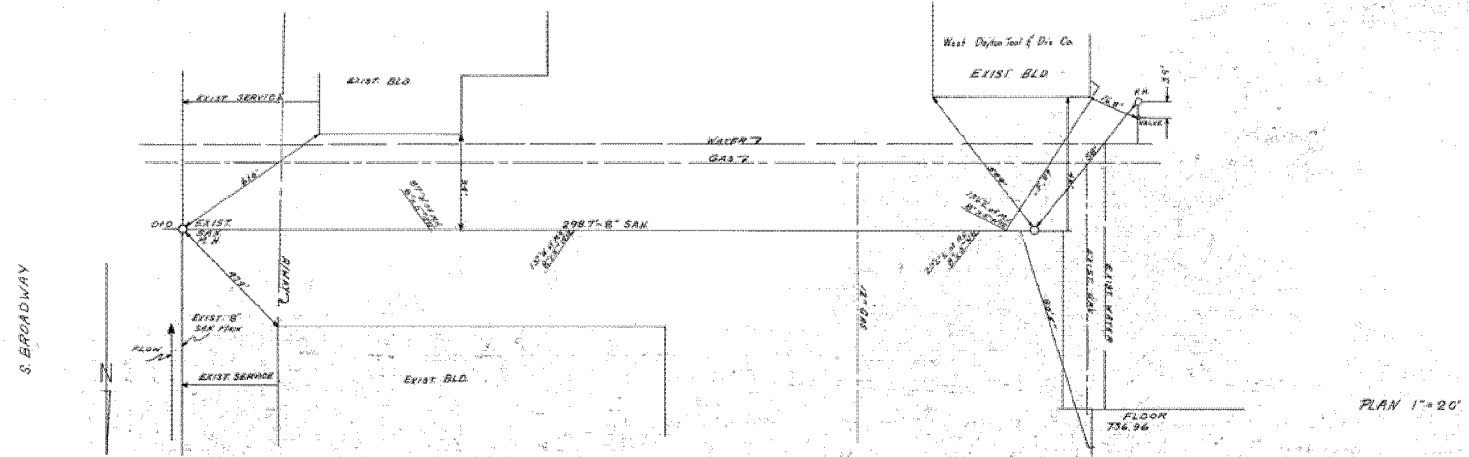
APPROVED: [Signature] ENGINEER: [Signature]

SHEET NO.  
634  
1520

COORDINATE NO.  
15  
15/17

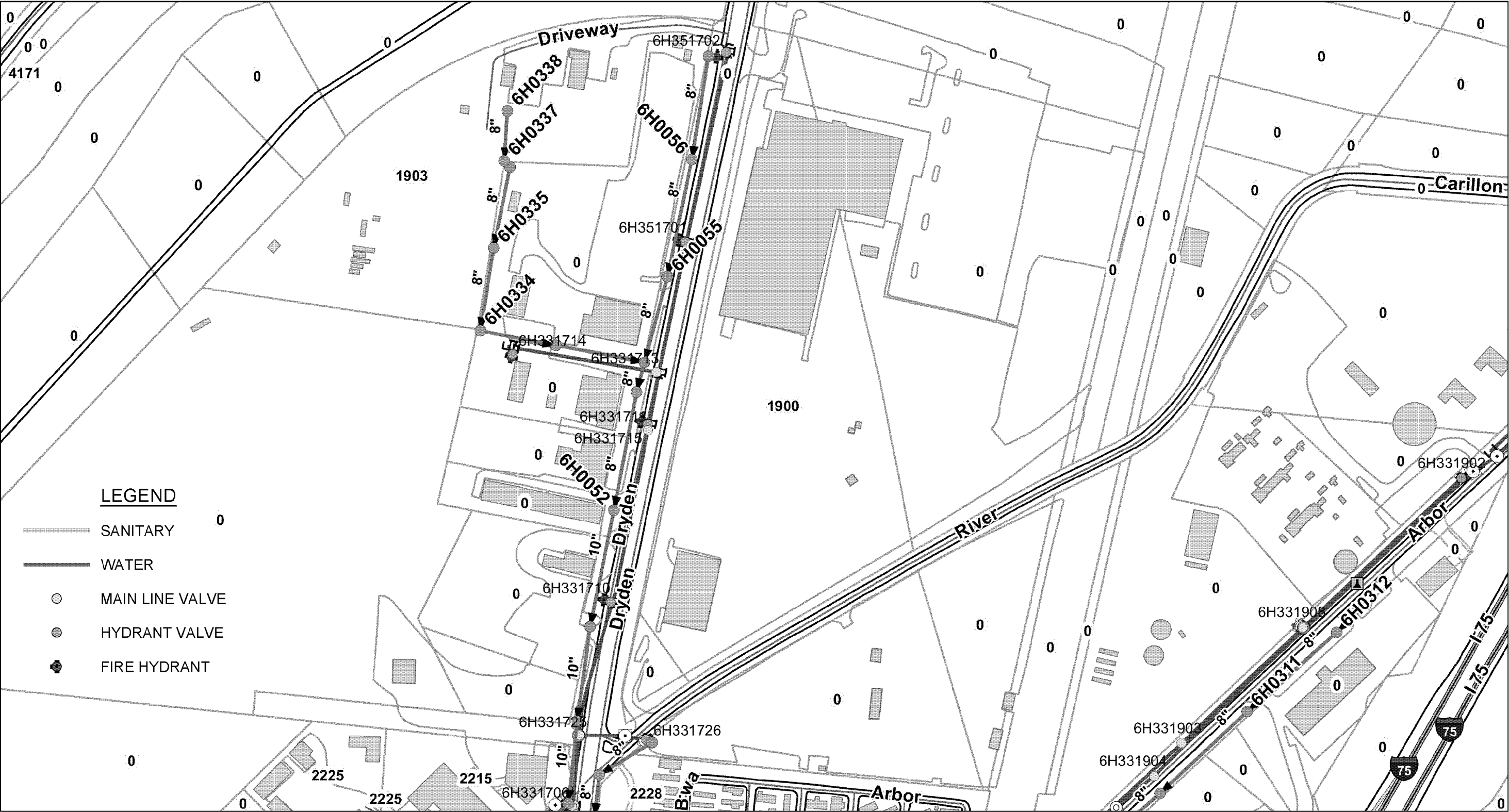
FINAL  
COORDINATE  
15  
W

157-016



GREATER MORaine SEWER DISTRICT			
NO. DATE	REVISION	CITY OF MORaine, MONTC CO. OHIO	
1	2000 SAK ASBUILT	PLAN & PROFILE	
2	2000 SAK ASBUILT	SEWER ON SOUTH BROADWAY	
SCALE: HORIZ. 1"=20' VERT. 1"=4'		DATE: 8/20/00	SUBMITTAL NO.
DES. J.E.		J.E. FINFROCK, ENG.	1 OF 2
CHKD. J.E.		APPROVED	ENGINEER





## **Attachment 2**

## Chan, Valerie

---

**From:** Cox, David <David.Cox@cinbell.com>  
**Sent:** Thursday, August 25, 2016 12:55 PM  
**To:** Chan, Valerie  
**Subject:** OUPS response  
**Attachments:** 000001\_2(crop).pdf

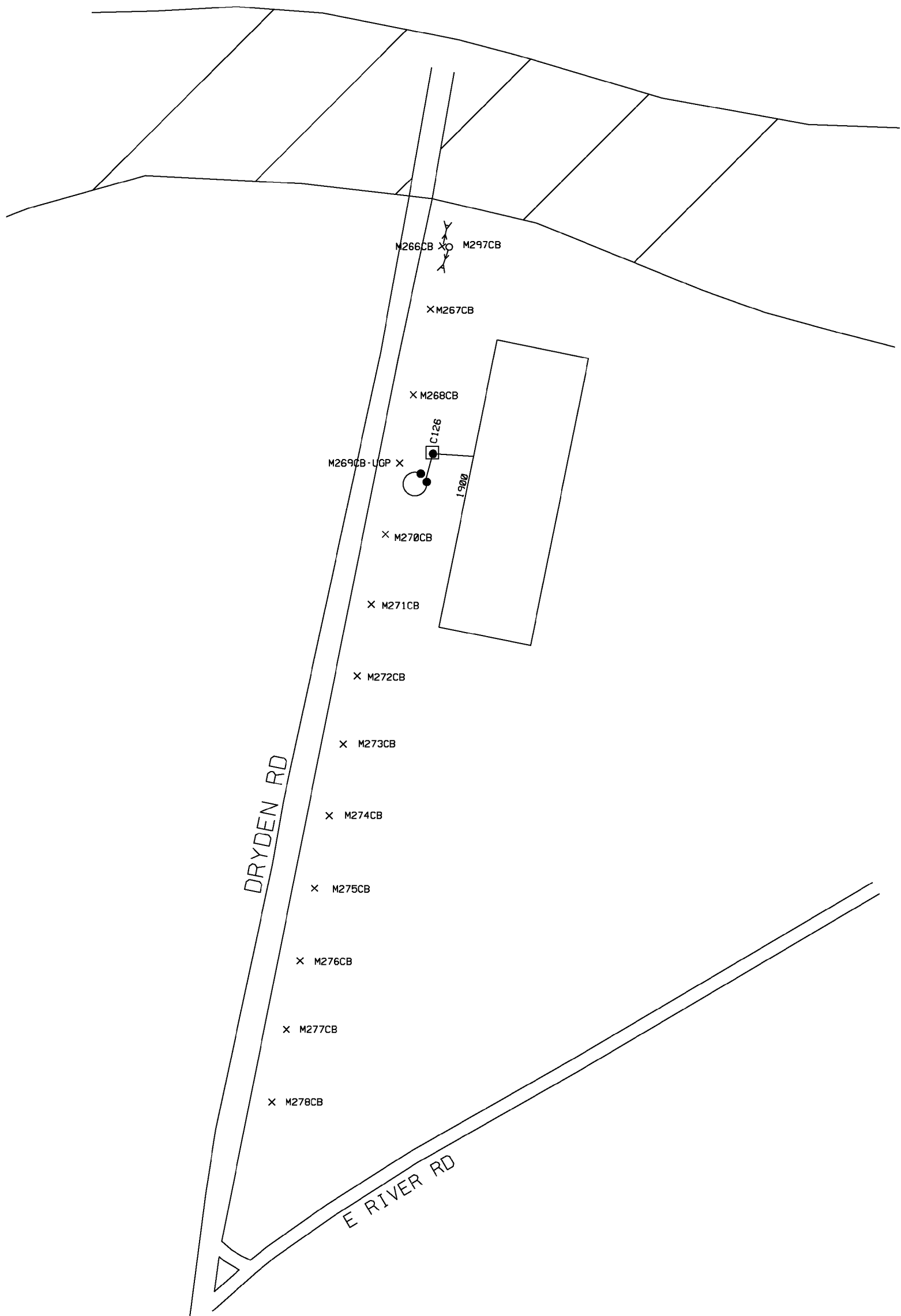
OUPS # A623702683  
Subject Area: 1900 Dryden rd  
Status: CBT has underground utilities in requested area, reference attachment

David Cox  
Conduit Group Clerk, Cincinnati Bell  
Phone: 513-565-0062  
Cell: 513-502-8702  
Email: [david.cox@cinbell.com](mailto:david.cox@cinbell.com)

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**Chan, Valerie**

---

**From:** alcs@zlp13991.vci.att.com  
**Sent:** Wednesday, August 24, 2016 1:29 PM  
**To:** Chan, Valerie  
**Subject:** HIGH PRIORITY FACILITY FOUND



## **AT&T DAMAGE PREVENTION**

### **\*\*\*FIBER OPTIC UTILITY LOCATE NOTIFICATION\*\*\***

**Ticket #: {A623702683}**  
**Ticket Address: {1900 DRYDEN RD} {MORaine}**  
**Caller Name & Phone: {VALERIE CHAN} {519-884-0510 Ext: 2296}**  
**Contractor Name & Phone: {GHD} {}**

**THIS LOCATE REQUEST IS NEAR AN AT&T HIGH PROFILE FIBER OPTIC FACILITY;  
BEFORE DIGGING IN THIS AREA WAIT ON THE LOCATES TO BE PERFORMED ;  
TAKE CARE TO OBSERVE SITE MARKINGS SUCH AS PAINT AND FLAGS ;  
HAND DIGGING IS MANDATORY WITHIN THE STATUTORY TOLERANCE ZONE,  
DAMAGE PREVENTION IS EVERYONES RESPONSIBILITY.  
THANK YOU.**

#### ***Contact Information***

**Positive Response :** Excavator may use this link to check for positive response.  
<http://www.oups.org/positive-response>

**AT&T Distribution Damage Prevention:** If assistance is needed during an excavation involving AT&T facilities or locate issues.



**Briant Thomas, 231-409-7939**

**One Call Center:** Any questions pertaining to a dig ticket should be directed to the state One Call (for example: location requested, utilities in the area or notification processes).

**Ohio Utility Protection Services, 800-362-2764**

**AT&T Distribution Locate Vendor:** If assistance is needed with interpretation of markings or locate issues contact the locate company for area.

**USIC Dispatch Center, 800-762-0592**

**Damage Reporting to AT&T Distribution:**  
888-611-4466 prompt #8

---

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## Chan, Valerie

---

**From:** agt\_comm@irth.com  
**Sent:** Thursday, August 25, 2016 11:12 PM  
**To:** Chan, Valerie  
**Subject:** Ticket A623702683 - Response to Dig Request

=====

To: GHD                      Attn: VALERIE CHAN

Voice: 5198840510 x2296              Fax:

Re: Response to Dig Request

Hello, this is an important message from Sprint Nextel regarding your request to locate our underground facilities in an area described on the one call center ticket.

=====

Ticket: A623702683

County: MONTGOMERY              Place: MORaine

Address: 1900 DRYDEN RD

SPTP:

. Sprint Nextel facilities are clear from the work area described on this One-Call Center ticket. If you have any questions or concerns, please call Sprint Nextel Call Before You Dig at 1-800-521-0579.

=====

If you have any questions please contact Sprint at 800-521-0579 that number again is Sprint at 800-521-0579.

=====

This message was generated by an automated system. Please do not reply to this email.

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## Chan, Valerie

---

**From:** IRTH.Net@CenturyLink.com  
**Sent:** Friday, September 02, 2016 8:14 AM  
**To:** Chan, Valerie  
**Subject:** Centurylink Locate Notification

=====

To: GHD                      Attn: VALERIE CHAN

Voice: 5198840510 x2296              Fax:

Re: Centurylink Locate Notification

Message from CenturyLink

This is an important message from CenturyLink

replying to your request to locate our underground facilities in an area

described on the one call center ticket. If you have any questions please call

CenturyLink at 1-800-283-4237

=====

Ticket: A623702683

County: MONTGOMERY      Place: MORaine

Address: 1900 DRYDEN RD

QSTP:

The described dig area of your locate request has been checked and is clear for

CenturyLink National Network, but may be a risk to CenturyLink local. If you

have any questions, please call CenturyLink at 1-800-283-4237. CenturyLink

has closed this ticket.

Centurylink

=====

This message was generated by an automated system. Please do not reply to this email.

---

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**Chan, Valerie**

**From:** Schaffer, Charles <SchafferC@mcoho.org>  
**Sent:** Friday, September 09, 2016 5:57 PM  
**To:** Hayward, Julian  
**Subject:** RE: Dryden Road storm sewer  
**Attachments:** DOC090916-09092016175430.pdf; DOC090916-09092016175201.pdf

Attached is a copy of the Water and sanitary sewer atlas in this area. I have also attached a copy of the as-built drawing for Arbor And Carrillon that does show some stm. Sewers. Unfortunately where you have requested we do not have our utilities.

---

**From:** Hayward, Julian [<mailto:Julian.Hayward@ghd.com>]  
**Sent:** Friday, September 09, 2016 5:10 PM  
**To:** Schaffer, Charles  
**Subject:** RE: Dryden Road storm sewer

OK, it is the section of Dryden Road within the area depicted below, more specifically the part between the river to the north and East River Road to the south.

Thanks



**Julian Hayward**

**GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)

---

**From:** Schaffer, Charles [<mailto:SchafferC@mcoho.org>]

**Sent:** Friday, September 09, 2016 4:30 PM

**To:** Hayward, Julian; [schaffercharlie@mcoho.org](mailto:schaffercharlie@mcoho.org)

**Subject:** RE: Dryden Road storm sewer

Please provide a map as to the exact location you are looking at. I will see if anything shows up on our as-built drawings of our utilities.

---

**From:** Hayward, Julian [<mailto:Julian.Hayward@ghd.com>]

**Sent:** Friday, September 09, 2016 2:42 PM

**To:** [schaffercharlie@mcoho.org](mailto:schaffercharlie@mcoho.org); Schaffer, Charles

**Subject:** Dryden Road storm sewer

Mr. Schaffer,

I was given your name by Tony Wenzler at City of Moraine, he indicated you may be able to assist with my inquiry.

I am working on an environmental investigation in the area of Dryden Road, specifically the section from East River Road extending northward toward the bridge that crosses the river.

The investigation requires some knowledge of buried infrastructure. I have some details from OUPS for sanitary sewer, water, gas etc. but they were not able to provide anything for the storm sewer system.

Would you be able to provide drawings showing the layout of the existing storm sewer system within the area noted above?

Thanks

**Julian Hayward, P.Eng.**

**GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)

651 Colby Drive Waterloo Ontario N2V 1C2 Canada | [www.ghd.com](http://www.ghd.com)

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

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## Chan, Valerie

---

**From:** Schaffer, Charles <SchafferC@mcoho.org>  
**Sent:** Monday, September 12, 2016 10:42 AM  
**To:** Hayward, Julian  
**Subject:** RE: Dryden Road storm sewer

Green is sanitary sewers , blue is water mains the Manhole numbers are next to the sanitary manhole circles. Red dots are fire hydrants yellow dots should be water valves. White dots are bends or fitting on the water main. The size of the water main or sanitary sewer main are labeled in blue or green accordingly. The white manholes in the trailer park are private manholes.

I hope this helps.

---

**From:** Hayward, Julian [mailto:Julian.Hayward@ghd.com]  
**Sent:** Monday, September 12, 2016 9:27 AM  
**To:** Schaffer, Charles  
**Subject:** RE: Dryden Road storm sewer

Mr. Schaffer, could you provide a legend for the details shown on the arc gis web map (attached)?

I think green line is water main and blue line is sanitary sewer? Or other way around?

Also I can see some red and yellow dots.

Thanks again

**Julian Hayward**

**GHD**

T: +1 519 884 0510 | M: +1 519 503 3627 | E: [julian.hayward@ghd.com](mailto:julian.hayward@ghd.com)

---

**From:** Schaffer, Charles [mailto:SchafferC@mcoho.org]  
**Sent:** Friday, September 09, 2016 5:57 PM  
**To:** Hayward, Julian  
**Subject:** RE: Dryden Road storm sewer

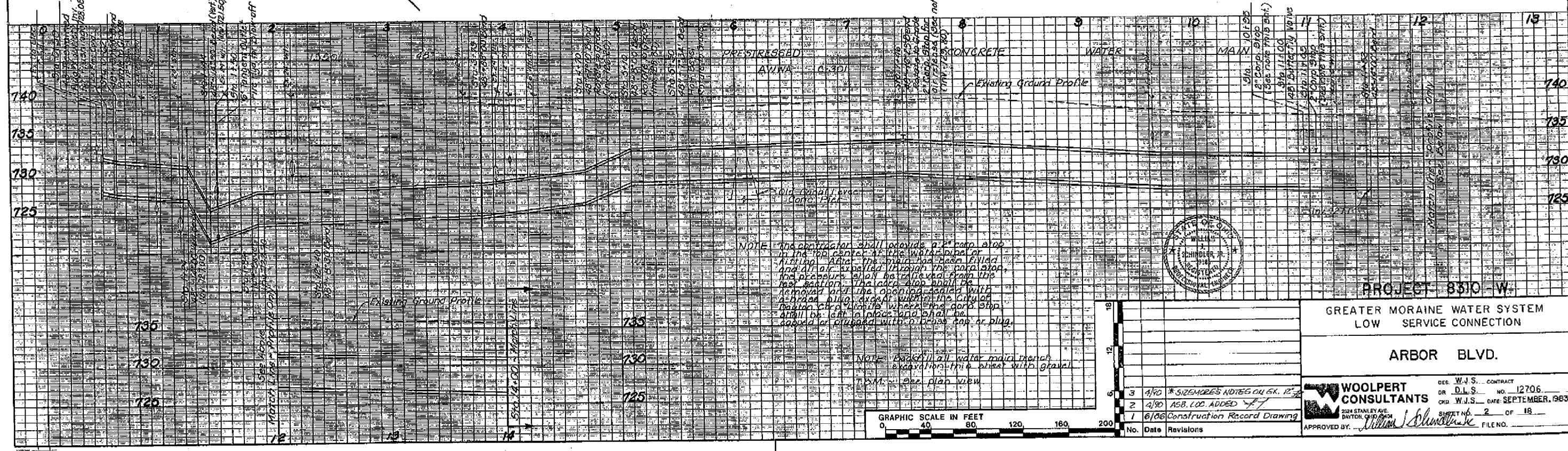
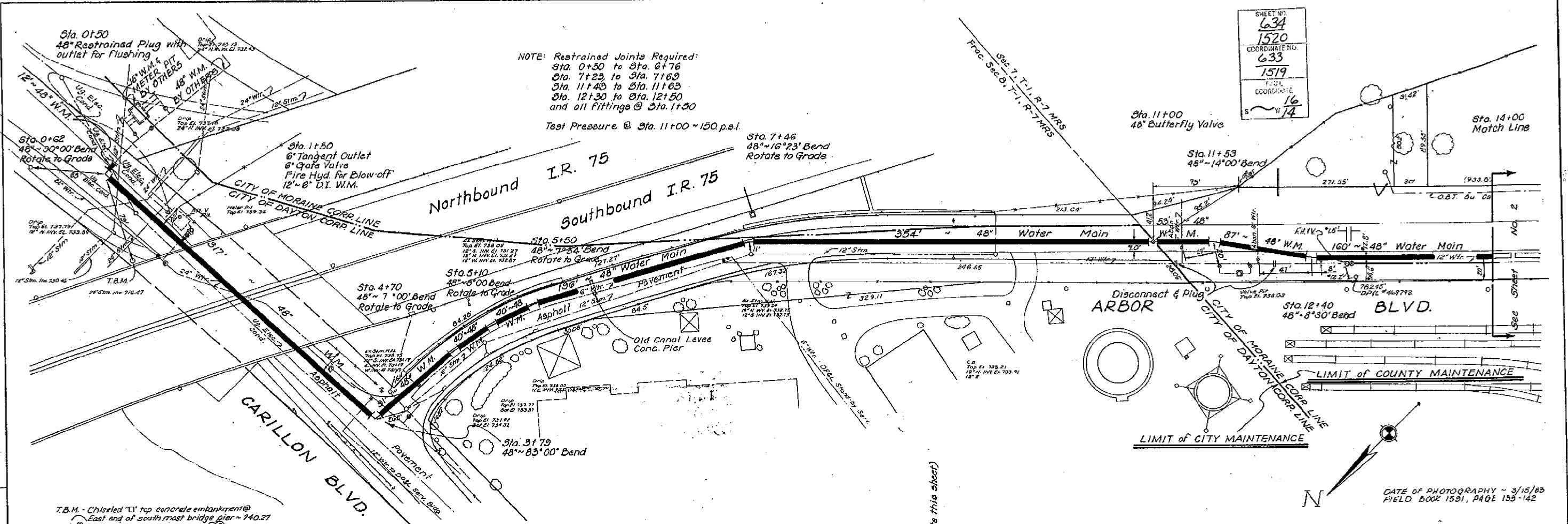
Attached is a copy of the Water and sanitary sewer atlas in this area. I have also attached a copy of the as-built drawing for Arbor And Carrillon that does show some stm. Sewers. Unfortunately where you have requested we do not have our utilities.

---

**From:** Hayward, Julian [mailto:Julian.Hayward@ghd.com]  
**Sent:** Friday, September 09, 2016 5:10 PM  
**To:** Schaffer, Charles  
**Subject:** RE: Dryden Road storm sewer

OK, it is the section of Dryden Road within the area depicted below, more specifically the part between the river to the north and East River Road to the south.

Thanks



## Chan, Valerie

---

**From:** East, Dominic <dominic.east@level3.com>  
**Sent:** Monday, September 19, 2016 11:47 AM  
**To:** Chan, Valerie  
**Subject:** Return to Requestor - 1900 Dryden Rd  
**Attachments:** Utility Map.pdf

Valerie,

Level 3 Communications, LLC ("Level 3") has received your utility notice dated 8/25/2016 regarding the 1900 Dryden Rd, Moraine OH ("Project"). In response to your inquiry please find the enclosed drawings indicating the approximate location of the Level 3 telecommunications facilities (the "Facilities"). Note that the locations of Facilities shown on these drawings are only approximate and Level 3 hereby disclaims any responsibility for the accuracy of this information. Persons working in the area covered by these drawings must contact the statewide Call-Before-You-Dig System to ascertain the location of underground facilities prior to performing any excavation.

After reviewing the information you provided it is uncertain whether the Project will impact the Facilities.

The Facilities have been constructed on private property and/or public right of way with the authorization of the applicable property owner. Prior to any work being performed by or on behalf of Level 3 all costs associated with the adjustment and/or relocation of the Facilities are required to be paid in full to Level 3.

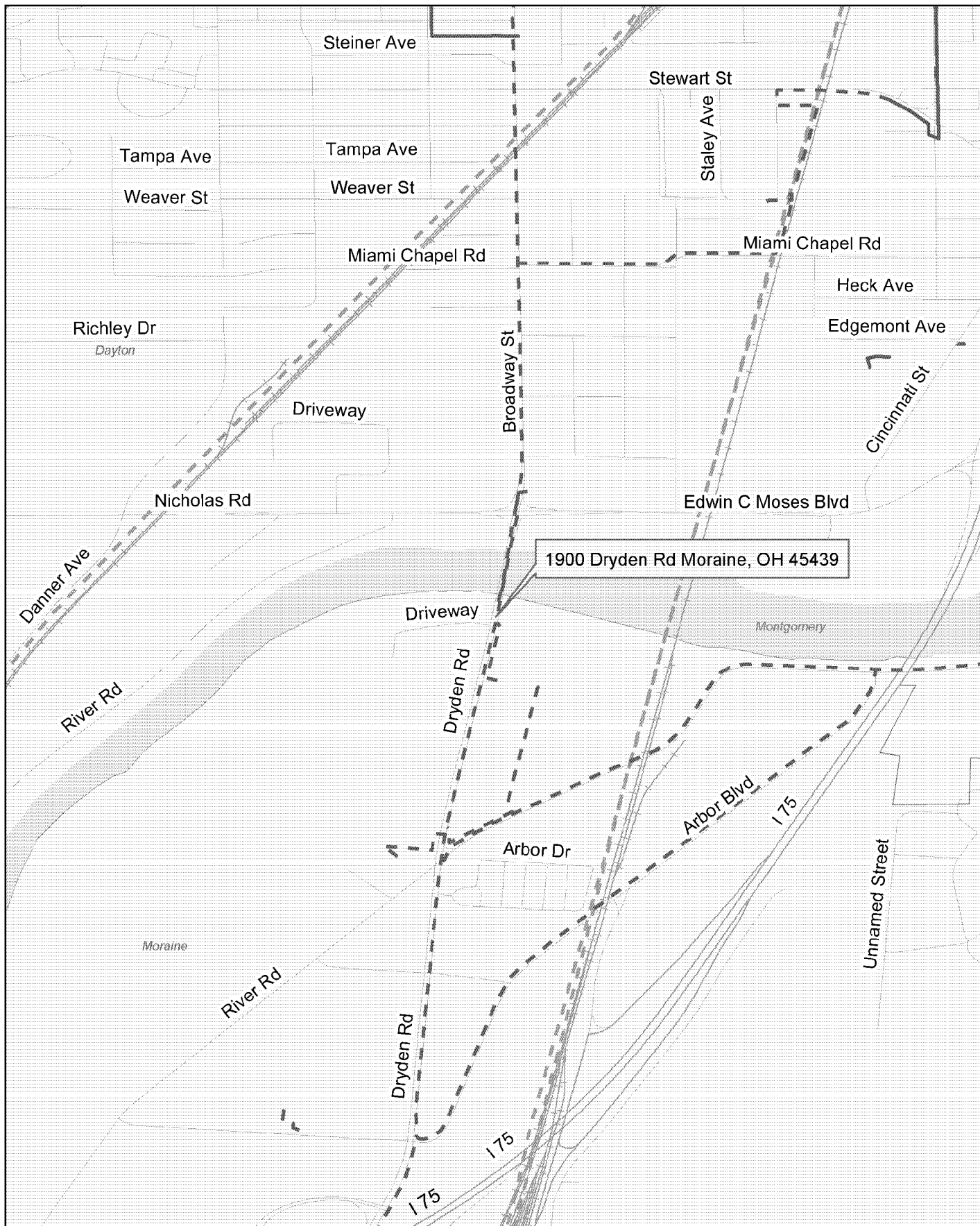
Please review the enclosed information. If it is determined that an adjustment and/or relocation of the Facilities is necessary to accommodate the Project, please contact the undersigned to discuss and reference the file number **65368 GL** with any future communications. Any changes or additions to the Project plans or parameters should be submitted to Level 3 for review of potential new impacts to the Level 3 facilities. Unless Level 3 receives information that such adjustment or relocation is necessary it will assume that any potential conflict between the Project and Facilities has been eliminated.

Thank you,

*Dominic East*  
**Business Analyst, OSP Relocations**  
Level 3 Communications  
1025 El Dorado Blvd  
Broomfield, CO 80021  
p: 720.888.4398  
e: [dominic.east@level3.com](mailto:dominic.east@level3.com)

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# Legend

## Level 3 Facilities

- Aerial
- - - Underground

## Non-Level 3 Fiber Optic Facilities

- Aerial
- - - Underground

Note that the locations of Facilities shown on these drawings are only approximate and Level 3 hereby disclaims any responsibility to third parties for the accuracy of this information. Persons working in the area covered by these drawings must contact the statewide Call-Before-You-Dig System to ascertain the location of underground facilities prior to performing any excavation.

## **Attachment 3**



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP

PROJECT NUMBER: 038443

CLIENT: ILLINOIS TOOL WORKS INC

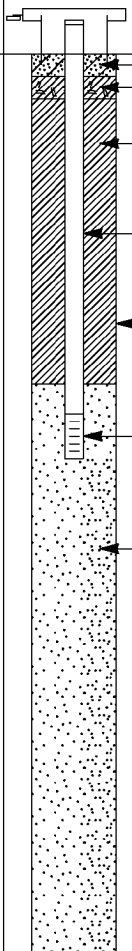
LOCATION: MORAIN, OHIO

HOLE DESIGNATION: GP11-09

DATE COMPLETED: August 20, 2009

DRILLING METHOD: GEOPROBE

FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	730.48	 <p>CEMENT BENTONITE CHIPS BENTONITE 0.5" PVC WELL CASING 2" BOREHOLE 0.5" PVC WELL SCREEN SAND PACK</p>					
2	SW/GW - SAND AND GRAVEL (FILL), medium to coarse sand, fine gravel, loose, well graded, brown/tan/off-white, dry	728.88		1GP		70		0.0
4	SM - SAND AND SILT (FILL), fine to medium sand, cohesive, dark gray/black, dry							
6	- gravel and sand at 4.6ft BGS							
8				2GP		70		0.0
10	- crushed stone at 8.5ft BGS							
12								
14	SW - SAND, little fine gravel, medium to coarse sand, loose, well graded, brown, dry	718.48		3GP		70		0.0
16								
18				4GP		70		0.0
20								
22	GW/SW - SAND AND GRAVEL, medium to coarse sand, fine gravel, loose, brown, dry	716.98	<p><u>WELL DETAILS</u> Screened interval: 722.48 to 721.48ft 8.00 to 9.00ft BGS Length: 1ft Diameter: 0.5in Slot Size: 0.010 Material: PVC Seal: 729.48 to 723.15ft 1.00 to 7.33ft BGS Material: BENTONITE CHIPS Sand Pack: 723.15 to 710.48ft 7.33 to 20.00ft BGS Material: #3 SAND</p>	5GP		80		0.0
24	- wet at 22.0ft BGS							
26								
28								
	END OF BOREHOLE @ 25.0ft BGS	705.48						

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 38443-60 GAS PROBES.GPJ CRA\_CORP.GDT: 2/5/10

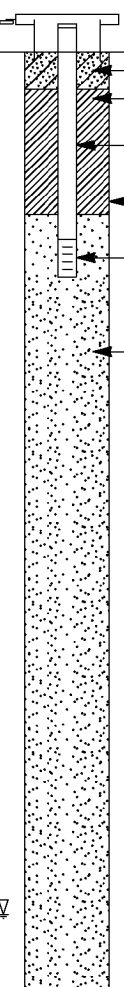


# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP  
PROJECT NUMBER: 038443  
CLIENT: ILLINOIS TOOL WORKS INC  
LOCATION: MORAINES, OHIO

HOLE DESIGNATION: GP12-09  
DATE COMPLETED: August 21, 2009  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	730.61						
2	SW - SAND (FILL), trace silt, trace fine gravel, medium to coarse grained sand, loose, well graded, brown, dry		 <p>CEMENT BENTONITE 0.5" PVC WELL CASING 2" BOREHOLE 0.5" PVC WELL SCREEN SAND PACK</p>	1GP		50		0.0
4								
6	- red clay brick fragments at 6.0ft BGS ML - SANDY SILT (FILL), cohesive, dark brown, damp	724.51		2GP		80		0.0
8	- rock fragments at 7.8ft BGS SW/GW - SAND AND GRAVEL, medium to coarse sand, fine gravel, loose, well graded, light brown/tan, dry	723.11						
10	- rock fragments at 9.3ft BGS			3GP		70		0.0
12								
14	- rock fragments at 13.0ft BGS - rock fragments at 14.2ft BGS			4GP		70		0.0
16								
18	- rock fragments at 17.0ft BGS			5GP		60		0.0
20								
22								
24								
26	END OF BOREHOLE @ 25.0ft BGS	705.61						
28			<u>WELL DETAILS</u> Screened interval: 725.61 to 724.61ft 5.00 to 6.00ft BGS Length: 1ft Diameter: 0.5in Slot Size: 0.010 Material: PVC Seal: 729.61 to 726.28ft 1.00 to 4.33ft BGS Material: BENTONITE Sand Pack: 726.31 to 705.61ft 4.30 to 25.00ft BGS Material: #3 SAND					
30								
32								
34								
<u>NOTES:</u> MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE WATER FOUND ∇								

OVERBURDEN LOG 38443-60 GAS PROBES.GPJ CRA CORP.GDT: 2/5/10

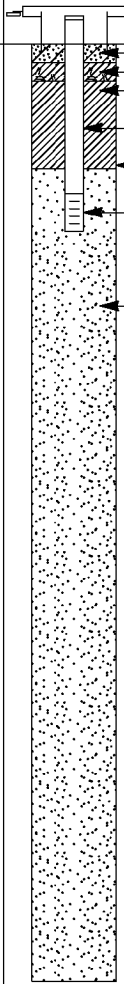


# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP  
PROJECT NUMBER: 038443  
CLIENT: ILLINOIS TOOL WORKS INC  
LOCATION: MORAINES, OHIO

HOLE DESIGNATION: GP19-09  
DATE COMPLETED: August 24, 2009  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.23						
2	GW/SW - SAND AND GRAVEL (FILL), fine, medium and coarse sand, fine gravel, loose, well graded, brown	731.23	 <p>CEMENT BENTONITE CHIPS BENTONITE 0.5" PVC WELL CASING 2" BOREHOLE 0.5" PVC WELL SCREEN SAND PACK</p>	1GP		70		0.0
4	SW - SAND (FILL), fine, medium and coarse sand, little fine gravel, well graded, medium to dark gray, dry - bottom of FILL at 22.5ft BGS			2GP		50		0.0
6				3GP		40		
8				4GP		40		0.0
10				5GP		74		0.0
12		711.73						
14	- pieces of glass at 14.0ft BGS							4.5
16		709.23						
18	- 1' perched H <sub>2</sub> O at 19.0ft BGS							
20		709.23						
22	SW/GW - SAND AND GRAVEL, loose, well graded, brown to medium brown, dry							
24		709.23						
26	END OF BOREHOLE @ 25.0ft BGS							
28								
30								
32								
34								

**WELL DETAILS**  
Screened Interval:  
730.23 to 729.23ft  
4.00 to 5.00ft BGS  
Length: 1ft  
Diameter: 0.5in  
Slot Size: 0.010  
Material: PVC  
Seal:  
733.23 to 730.90ft  
1.00 to 3.33ft BGS  
Material: BENTONITE CHIPS  
Sand Pack:  
730.90 to 709.23ft  
3.33 to 25.00ft BGS  
Material: #3 SAND

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 38443-60 GAS PROBES.GPJ CRA\_CORP.GDT 2/5/10





# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP  
PROJECT NUMBER: 038443  
CLIENT: ILLINOIS TOOL WORKS INC  
LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP20-09  
DATE COMPLETED: August 24, 2009  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	731.51	<p>CEMENT BENTONITE CHIPS BENTONITE 0.5" PVC WELL CASING 2" BOREHOLE 0.5" PVC WELL SCREEN SAND PACK</p>					
2	SW/GW - SAND AND GRAVEL (FILL), medium to coarse sand, fine gravel, loose, well graded, brown, dry			1GP		70		0.0
4	SW - SAND (FILL), fine to medium sand, silt, consolidated, well graded, dark gray, moist	727.51						
6	- rust sand at 6.5ft BGS			2GP		60		0.0
8	- 1' gray sand, wet (perched water) at 7.0ft BGS							
	- foundry-type sand at 8.5ft BGS	722.51						
10	SW/GW - SAND AND GRAVEL (FILL), medium to coarse sand, fine gravel, silt, well graded, brown, dry			3GP		80		0.0
12								
14								
16	- rock fragments at 16.7ft BGS			4GP		60		0.0
18								
20								
22				5GP		60		0.0
24	- wet at 23.7ft BGS							
26	END OF BOREHOLE @ 25.0ft BGS	706.51		<u>WELL DETAILS</u> Screened interval: 727.51 to 726.51ft 4.00 to 5.00ft BGS Length: 1ft Diameter: 0.5in Slot Size: 0.010 Material: PVC Seal: 730.51 to 728.18ft 1.00 to 3.33ft BGS Material: BENTONITE CHIPS Sand Pack: 728.18 to 706.51ft 3.33 to 25.00ft BGS Material: #3 SAND				
<b>NOTES:</b> MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE WATER FOUND ▽								

OVERBURDEN LOG 38443-60 GAS PROBES.GPJ CRA\_CORP.GDT 2/5/10



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-62-03  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: GP22-13  
DATE COMPLETED: July 3, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SOIL GAS PROBE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	TOPSOIL	0.17						
2	SW-SAND (FILL), loose, trace fine gravel, fine to medium sand, some coarse sand, well graded, brown, dry		CONCRETE					0.0
		2.80		1GP		3.8		0.0
4	SP-SAND (FILL), slightly compact, fine grained, poorly graded, gray, dry - glass pieces at 4.0ft BGS - some coarse sand/fine gravel, brown at 4.5ft BGS		BENTONITE CHIPS					0.0
6	SW-SAND (FILL), little fine gravel, loose, medium to coarse sand, well graded, brown/black, dry	5.00	1/2" PVC WELL CASING					0.0
8			2 1/4" BOREHOLE	2GP		3.7		49.9
10								41.5
12				3GP		3.2		26.2
14								
16								
18				4GP		0.0		
20	SW/GW-SILTY SAND/GRAVEL, loose, fine, medium and coarse sand, fine gravel, brown, dry	19.00	SAND PACK					0.0
	END OF BOREHOLE @ 20.0ft BGS	20.00	1/4" HOLED PVC WELL SCREEN					
22								
24								
26								
28								

## WELL DETAILS

Screened interval:

19.00 to 20.00ft BGS

Length: 1ft

Diameter: 0.5in

Slot Size: 0.25

Material: PVC

Seal:

2.00 to 18.20ft BGS

Material: BENTONITE CHIPS

Sand Pack:

19.00 to 20.00ft BGS

Material: #3 SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 038443-62-03 SOIL GAS PROBES JULY 2013 GP CRA CORP GDT 9/18/13



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-62-03  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: GP23-13  
DATE COMPLETED: July 3, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SOIL GAS PROBE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
2	SW/GW-SAND/GRAVEL (FILL), loose, medium to coarse sand, fine to coarse gravel, well graded, brown/tan, dry	1.80	CONCRETE	1GP		3.7		0.3
4	SW-SAND (FILL), trace fine gravel, medium to coarse sand, trace fine sand, well graded, gray, dry - red clay brick fragments at 3.0ft BGS - fine grained silty sand at 3.8ft BGS - silty sand/gravel at 4.5ft BGS		BENTONITE CHIPS					0.0
6			1/2" PVC WELL CASING					0.0
8			2 1/4" BOREHOLE	2GP		2.0		2.6
10	- wood pieces at 10.0ft BGS							0.0
12		12.00						0.2
14	GW/SW-SAND AND GRAVEL, medium to coarse sand, fine gravel, well graded			3GP		2.4		0.0
16								0.0
18	- silty, moist at 18.7ft BGS		1/4" HOLED PVC WELL SCREEN	4GP		2.0		0.0
20	END OF BOREHOLE @ 20.0ft BGS	20.00	SAND PACK					0.0
22			<u>WELL DETAILS</u> Screened interval: 17.50 to 18.50ft BGS Length: 1ft Diameter: 0.5in Slot Size: 0.25 Material: PVC Seal: 2.00 to 16.70ft BGS Material: BENTONITE CHIPS Sand Pack: 16.70 to 20.00ft BGS Material: #3 SAND					
24								
26								
28								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 038443-62-03 SOIL GAS PROBES JULY 2013 GPJ CRA CORP GDT 9/18/13

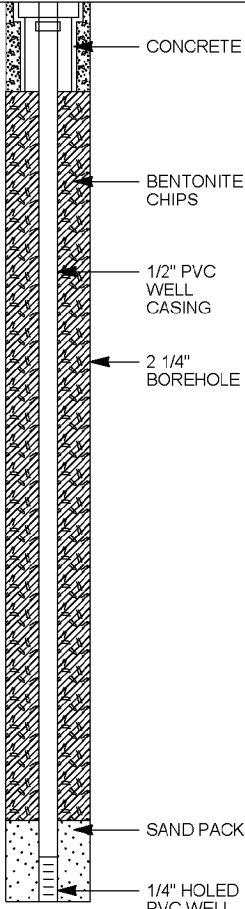


# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-62-03  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: GP24-13  
DATE COMPLETED: July 3, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SOIL GAS PROBE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
2	SP-SAND, trace silt, loose, little fine gravel, fine grained, poorly graded, brown, dry - silt at 1.3ft BGS	1.40	 <p>CONCRETE</p> <p>BENTONITE CHIPS</p> <p>1/2" PVC WELL CASING</p> <p>2 1/4" BOREHOLE</p> <p>SAND PACK</p> <p>1/4" HOLED PVC WELL SCREEN</p>	1GP		4.0		0.0
4	SW-SAND, loose, medium to coarse sand, well graded, gray black - red clay brick at 1.7ft BGS	2.00						0.0
6	SP-SAND, slightly compact, fine grained, poorly graded, gray - perched water zone at 4.5ft BGS							0.0
8	CL-SILTY CLAY, trace coarse sand and fine gravel, cohesive, low plasticity, brown, dry	7.00		2GP		4.5		2.5
10	SP-SAND, slightly compact, fine grained, poorly graded, gray - coarse sand, yellow/black at 8.9ft BGS - silty sand at 9.5ft BGS	7.80						0.0
12								0.0
14				3GP		0.7		0.0
16	ML-CLAYEY SILT, brown, moist	15.00						0.0
18	SW/GW-SAND/GRAVEL, loose, well graded, brown/tan, dry	16.00		4GP		2.5		0.0
20	END OF BOREHOLE @ 20.0ft BGS	20.00						0.0
22			<p><b>WELL DETAILS</b> Screened interval: 19.00 to 20.00ft BGS Length: 1ft Diameter: 0.5in Slot Size: 0.25 Material: PVC Seal: 2.00 to 18.20ft BGS Material: BENTONITE CHIPS Sand Pack: 19.00 to 20.00ft BGS Material: #3 SAND</p>					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 038443-62-03 SOIL GAS PROBES JULY 2013 GPJ CRA CORP GDT 9/18/13

## **Appendix D**

# **Supplemental Stratigraphy Logs**

# BORING/WELL LOG DATA

KECK CONSULTING SERVICES, INC.

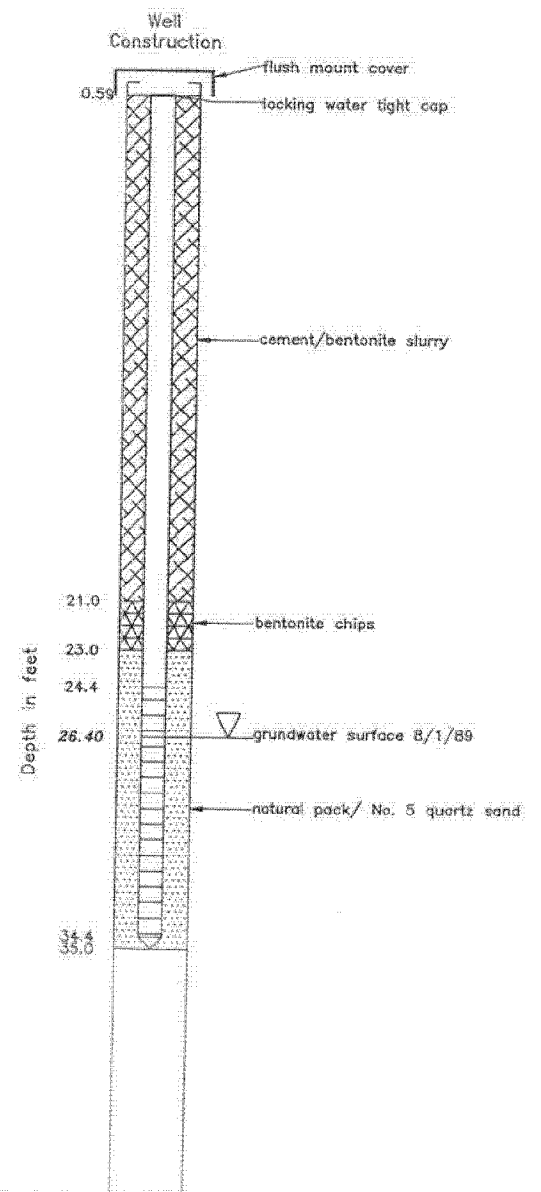
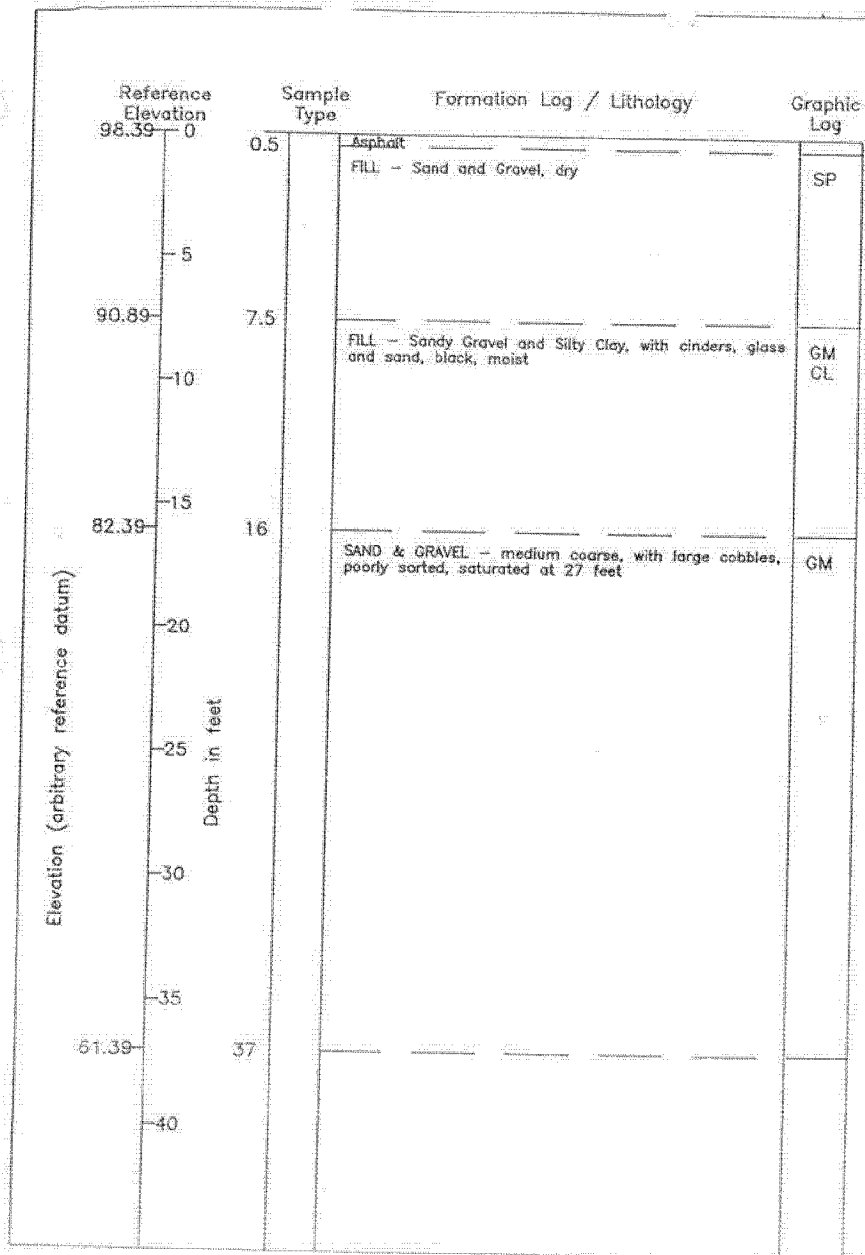
PROJECT: DP&L: Dryden Road	WELL/BORING No.: MW-1/B-1
LOCATION: Dayton, Ohio	DATE DRILLED: 8/1/89
DRILLING METHOD: Hollow Stem Auger	CASING TYPE/DIA.: Schd. 40 PVC/2-inch
TOTAL DEPTH DRILLED: 37 feet	TOTAL CASING: 34.45 feet
GROUND ELEVATION: 98.39 feet	T.O.C. ELEVATION: 97.80 feet
GROUT TYPE/QUANTITY: Bentonite and Cement/ approx. 75 gallons	SCREEN TYPE/LENGTH: PVC/10 feet
GROUT INTERVAL(S): Surface to 21 feet	SCREENED INTERVAL: approx. 24.4 to 34.4 feet
DEPTH TO WATER: approx. 27 feet	GRAVEL PACK TYPE: Keck #50
WATER LEVEL ELEVATION:	GRAVEL PACK INTERVAL: 23 to 25 feet
	STATIC WATER LEVEL: 26.40 feet DATE: 9/12/89

REMARKS: All elevational data has been referenced to an arbitrary benchmark.

LOGGED BY: Timothy F. Hebert

SIGNATURE:

In feet DEPTH.	H2O/SOIL SAMPLE	FORMATION DESCRIPTION			
0 - .5		Asphalt			
.5 - 7.5		Sand and Gravel; Coarse gravel, well rounded, medium to fine sand, brown, not saturated, fill material			
7.5- 16		Sandy Clay; black-brown, moist, disturbed soils (fill) containing glass and oxidized metal, not saturated, minor perched water may be present at approx. 14 feet, identified a thin stringer of brown clay at 15.5 feet, poor cutting returns, brown clay contains some medium to coarse gravel and was cohesive.			
16 - 37		Sand and Gravel; medium to coarse sand and gravel, hard drilling due to large cobbles, poorly sorted with some silts, appears saturated at approximately 27 feet			
SPLIT SPOON SAMPLING					
Interval	Number	Blow Counts	Recovery	PID	Comments
4 - 6	SS1	7,21,22,27	approx. 10 inches	< 1 ppm	Sand and gravel, brown, <sup>not</sup> saturated
9 - 11	SS2	4,4,6,10	approx. 10 inches	< 1	Sandy Clay, black-brown
14 - 16	SS3	6,8,10,20	approx. 17 inches	< 1	Sandy Clay, ASA to 15.5 feet, brown clay to 16 feet
19 - 21	SS4	6,8,10,12	approx. 10 inches	< 1	Sand and gravel, brown, medium to coarse
24 - 26	SS5	18,18,19,22	approx. 9 inches	< 1	Sand and gravel, ASA
29 - 31	SS6	44,25,22	approx. 11 inches	< 1	Sand and gravel, ASA
34 - 36	SS7	23,27,44	Not recorded	40-50 ppm	Sand and gravel, ASA, soil sample



**KECK CONSULTING SERVICES, INC.**  
**WELL INSTALLATION INFORMATION**

Well Number: MW-1 Total Depth: 34.45 Feet  
Below Top of Casing

RCS Representative: TIM ROBERT

Started: 8/01/89 Completed: 8/01/89

Drilling Method: 4 1/4-inch Hollow Stem Auger

Well cover: Flush Mount Cap locking  
Water Tight

Riser: Diameter: 2.0 inches

Material: PVC

Joints: Machine Flush Threaded

Length: 21.80 Feet

Riser Interval: -0.59 to 21.4'

Screen: Diameter: 2.0 inches

Material: PVC

Type: Machine

Slot: 0.010 inches

Length: 10.0 Ft.

Screened Interval: 24.4 Ft. to 34.4 Ft.

Grout Material: Cement/Bentonite Slurry

Quantity: 75 Gallons

Interval: Surface to 21.0 Feet

Seal Material: Bentonite chips

Quantity: 100 lbs.

Seal Interval: 21.0 Ft. to 23.0 Ft.

Filter Pack Material: Natural Pack/ No. 5 Quartz Sand

Quantity: 200 lbs.

Filter Interval: 23.0 Ft. to 25.0 Ft.

Depth to groundwater: 26.40 Ft. BTWC

Date: 8/12/89

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**GROUNDWATER MONITORING  
WELL COMPLETION DIAGRAM**

TEST BORING B-1

WELL MW-1

SHEET 1 of 1 DATE 10/4/89

CLIENT Dayton Power & Light

LOCATION Dryden Road

PROJECT 447-2477

**HUNTEN/KECK**

# BORING/WELL LOG DATA

KECK CONSULTING SERVICES, INC.

PROJECT: DP&L: Dryden Road		WELL/BORING No.: MW-2/B-3
LOCATION: Dayton, Ohio		DATE DRILLED: 8/25/89
DRILLING METHOD: 4 1/4-inch Hollow Stem Auger		CASING TYPE/DIA: PVC/2.0 inch
TOTAL DEPTH DRILLED: 36 feet BGL		TOTAL CASING: 35.62 feet
GROUND ELEVATION: 98.19 feet		T.O.C. ELEVATION: 97.86 feet
GROUT TYPE/QUANTITY: See groundwater monitoring well completion diagrams		SCREEN TYPE/LENGTH: 0.010 PVC/10 feet
GROUT INTERVAL(S): "		SCREENED INTERVAL: 25.6 to 35.6 feet
DEPTH TO WATER: 26.0 feet BGL		GRAVEL PACK TYPE: No. 5 Quartz Sand
WATER LEVEL ELEVATION:		GRAVEL PACK INTERVAL: 23.8 to 36.1 feet
		STATIC WATER LEVEL: 26.58 ft. DATE: 9/12/89
REMARKS: One sample every 5 feet; BGL = below ground level		
LOGGED BY: Paul Stork		SIGNATURE:
In feet DEPTH.	H2O/SOIL SAMPLE	FORMATION DESCRIPTION
0 - .5		Asphalt
4 - 6	B3-1	0.75 feet Fill, fine gravelly sand, some medium and coarse sand,
10,30,44,19	1045	trace silt and clay, poor sorting and subrounded to sub-
		angular, dry, tan. 0.75/2.0 Recovery
9 - 11		No recovery, pushed cobble. Note: at 7.0 feet, auger cuttings were
12,12,11,6		black, sandy gravel, with coal ash-like odor (fill)
14 - 16	B3-2	0.8 feet Fill, silty clay, some medium sand and cinders, moist,
3,12,15,10	1103	low plasticity, black, roofing tar odor
		0.2 feet Fine gravelly clay, medium plasticity, slightly moist, tan
		1.0/2.0 Recovery
19 - 21	B3-3	0.7 feet Fill, medium sand and fine gravel with clay, poor
12,15,10		sorting, slightly moist, tan. 0.7/2.0 Recovery
24 - 16	B3-4	0.5 feet Pounded through quartzite coarse gravel
87-106- 37,19	1135	0.4 feet Fine gravel with coarse, medium, and fine sand, trace silt,
		poor sorting, moist, tan
		0.1 feet Fine gravelly clay, trace medium sand, medium plasticity,
		moist, tan, tip of spoon was saturated with water
		1.0/2.0 Recovery



BORING/WELL LOG DATA  
 KECK CONSULTING SERVICES, INC.

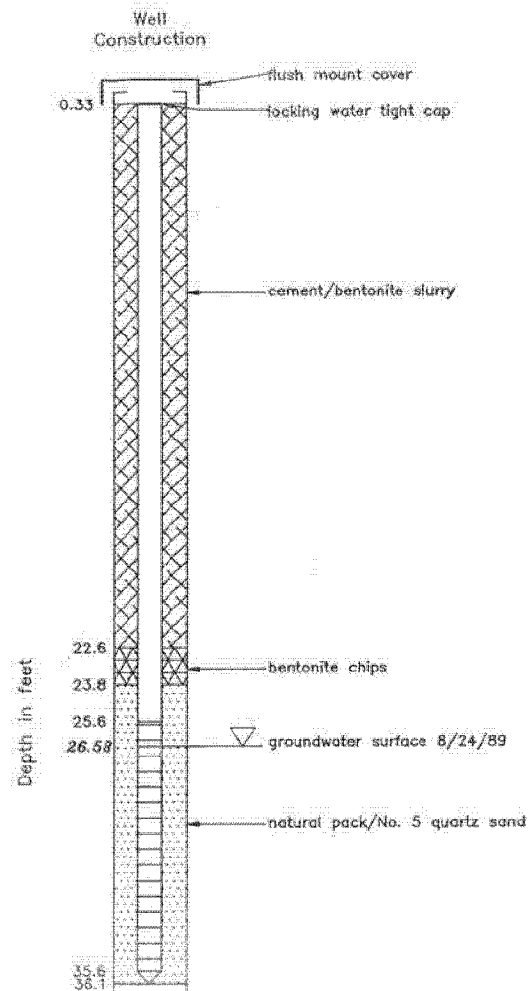
PROJECT: DP&L: Dryden

PAGE: 2

DATE: 8/25/89 WELL/BORING No. B-3

[illegible]

Reference Elevation	Sample Type	Formation Log / Lithology	Graphic Log
88.19 87.69	0.5	ASPHALT	SP
		FILL - Fine gravelly Fine Sand, poor sorting, dry, tan	
91.19	7	FILL - Sandy Gravel, with cinders, black	GM
85.19	13	FILL - Silty Clay, some sand, and cinders, black	CL
82.19	16	FILL - Medium Sand and Fine Gravel, with clay	GC
77.19	21	Fine Gravel - with silt, poor sorting, moist, tan	GM
72.19	28	Fine Gravel - some coarse sand, trace silt, poor sorting, saturated, brown	GM
64.19	34	Fine Gravel - trace coarse sand, well sorted, saturated, brown	GW



KECK CONSULTING SERVICES, INC.  
WELL INSTALLATION INFORMATION

Well Number: MW-2 Total Depth: 35.6 Feet  
Below Top of Casing

KCS Representative: Paul Stock

Started: 8/24/89 Completed: 8/24/89

Drilling Method: 4 1/4-inch Hollow Stem Auger

Well Cover: Flush Mount Cap: Locking Water Tight

Riser: Diameter: 2.0 inches  
Material: PVC  
Joints: Machine Flush Threaded  
Length: 25.30 Feet  
Riser Interval: -0.33 to 25.6 Feet

Screen: Diameter: 2.0 inches  
Material: PVC  
Type: Machine  
Slot: 0.010 inches  
Length: 10.0 Ft.  
Screened Interval: 25.6 Ft. to 35.6 Ft.

Grout Material: Cement/Bentonite Slurry  
Quantity: 80 Gallons  
Interval: Surface to 22.6 Feet

Seal Material: Bentonite Chips  
Quantity: 50 lbs.  
Seal Interval: 22.6 Ft. to 23.8 Ft.

Filter Pack Material: Natural Pack/No. 20 Quartz Sand  
Quantity: 100 lbs.  
Filter Interval: 23.8 Ft. to 35.6 Ft.

Depth to Groundwater: 26.58 Ft. BTOC

Date: 9/17/89

### GROUNDWATER MONITORING WELL COMPLETION DIAGRAM

TEST BORING B-2

WELL MW-2

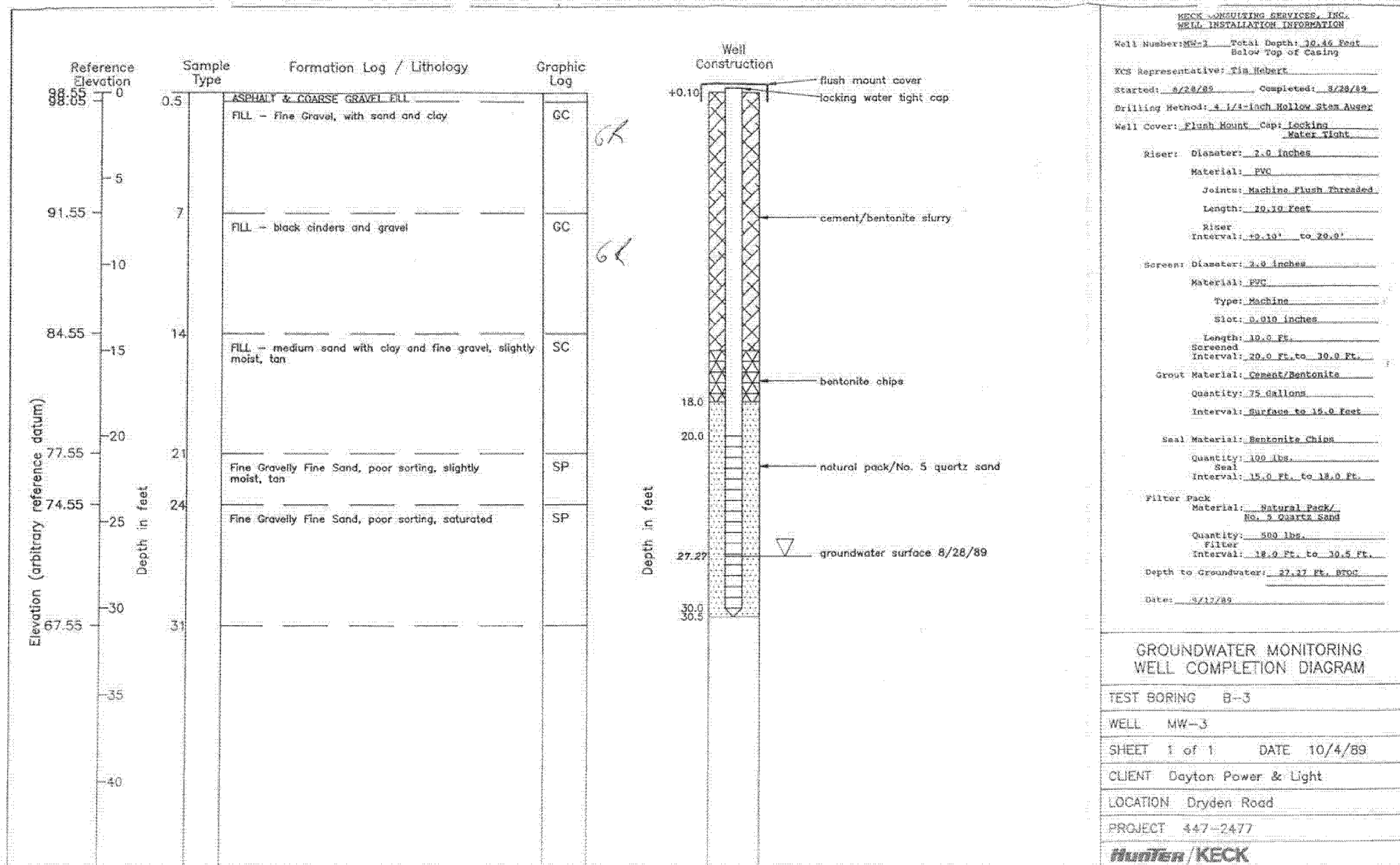
SHEET 1 of 1 DATE 10/4/89

CLIENT Dayton Power & Light

LOCATION Dryden Road

PROJECT 447-2477

HUNTEN/KECK



# BORING/WELL LOG DATA

KECK CONSULTING SERVICES, INC.

PROJECT: DP&L: Dryden Road		WELL/BORING No.: B-2	
LOCATION: Dayton, Ohio		DATE DRILLED: 8/3/89	
DRILLING METHOD: Hollow Stem Auger		CASING TYPE/DIA.: N/A	
TOTAL DEPTH DRILLED: 27 feet		TOTAL CASING: N/A	
GROUND ELEVATION: 98.19 feet		T.O.C. ELEVATION: N/A	
GROUT TYPE/QUANTITY: Bentonite and Cement/ approx. 90 gallons		SCREEN TYPE/LENGTH: N/A	
GROUT INTERVAL(S): 0 - 27 feet		SCREENED INTERVAL: N/A	
DEPTH TO WATER: approx. 26 feet		GRAVEL PACK TYPE: N/A	
WATER LEVEL ELEVATION: N/A		GRAVEL PACK INTERVAL: N/A	
		STATIC WATER LEVEL: N/A      DATE:	
REMARKS: The ground elevation at B-2 has been referenced to a benchmark of 100 feet. Was abandoned due to auger refusal.			
LOGGED BY: Timothy F. Hebert		SIGNATURE:	

In feet DEPTH	H2O/SOIL SAMPLE	FORMATION DESCRIPTION
0 - .5		Asphalt
.5 - 6		Sand and Gravel; coarse gravel with medium to fine sand, brown, not saturated, fill material
6 - 17		Sandy Clay; black-brown, medium to fine sand, some indications of minor perched water at approximately 7 feet, soils are fill material as glass and oxidized metal fragments are present in cuttings
17 - 27		Sand and Gravel; brown, medium to coarse well rounded gravel, medium to coarse sand, poorly sorted, moist, saturation appears to be approximately 26 feet. Auger refusal at 27 feet, decided to abandon borehole and re-drill. Was bentonite/cement grouted through the augers to the near surface and plugged with granual bentonite. No well installed.
SPLIT SPOON SAMPLING		
Interval	Number	Blow Counts      Recovery      PTD      Comments
4 - 6	1	8, 8, 10, 11      approx. 12 inches      < 1      Sand & gravel, brown, fill
9 - 11	2	6, 6      approx. 8 inches      < 1      Sandy Clay, black-brown, fill
14 - 16	3	6, 8, 17      approx. 5 inches      < 1      ASA, fill
19 - 21	4	74, 26      approx. 12 inches      < 1      Sand and gravel, brown
24 - 26	5	17, 16, 17      no sample retained      NA

KECK CONSULTING SERVICES, INC.

[illegible]



# LJB Inc.

3100 Research Boulevard  
P.O. Box 20246  
Dayton, Ohio 45420-0246  
(937) 259-5000 tel / (937) 259-5100 fax  
ljbinc.com

## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-4/SB-4

TOTAL DEPTH: 30'

### PROJECT INFORMATION

PROJECT: Tier I  
SITE LOCATION: DP&L - Dryden Rd.  
JOB NO.: 0103398A.00  
LOGGED BY: Cindy Edgington  
PROJECT MANAGER: Edward A. Council, PG  
DATES DRILLED: March 6, 2006

### DRILLING INFORMATION

DRILLING CO.: Fore Drilling Co.  
DRILLER: Robert Bender  
RIG TYPE: Diedrich D50  
METHOD OF DRILLING: Hollow stem auger  
SAMPLING METHODS: Split Spoon  
HAMMER WT./DROP 140 lb., 30 in.

☞ Water level during drilling

☞ Water level in completed well

DEPTH	SOIL SYMBOLS	Poss. Soil Cont.	SOIL DESCRIPTION	SAMP. No.	Rec. inch.	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			Asphalt: Asphalt		N/A	NM	NM		
			Gravel: Gravel Sub-base						
			Fill Material: Fill, tan Sandy Gravel, moist, friable, dense, non-plastic	16	8-14-30-30	0.0			
5				16	8-27-27-24	0.0			
			Clay and Silt: Red brown to gray Silty Clay to Clay Silt, plastic, moist, dense, firm, sandier at 8'	16	5-10-15-15	0.0			
				7	5-5-3-3	0.0			
10				13	3-3-3-3	0.0			
				15	14-5-4-5	0.0			
15			Gravel and Sand: Light gray Sandy Gravel, friable, dense, non-plastic, hard	23	5-8-10-18	0.0			
				MW-4 16'-18'	14	10-10-10-8	1.0		
					13	9-11-14-7	0.0		
20					12	7-11-21-29	0.0		
			Gravel and Sand: Same petroleum odors below 22'	24	12-21-26-28	0.0			
				MW-4 24'-26'	19	12-31-36-36	0.0		
25			Gravel and Sand: Same but saturated	0	50/1	0.0			
				7	22-49-38-21	0.0			
30									

Bentonite Seal

PVC Casing

Sand Pack

Screened Interval

NOTES: Weather: partly cloudy, mild

Page 1 of 1



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## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-5/SB-5

TOTAL DEPTH: 31'

### PROJECT INFORMATION

PROJECT: Tier I  
SITE LOCATION: DP&L - Dryden Rd.  
JOB NO.: 0103398A.00  
LOGGED BY: Cindy Edgington  
PROJECT MANAGER: Edward A. Council, PG  
DATES DRILLED: March 6, 2006

### DRILLING INFORMATION

DRILLING CO.: Fore Drilling Co.  
DRILLER: Robert Bender  
RIG TYPE: Diedrich D50  
METHOD OF DRILLING: Hollow stem auger  
SAMPLING METHODS: Split Spoon  
HAMMER WT./DROP: 140 lb., 30 in.

☒ Water level during drilling

☒ Water level in completed well

DEPTH	SOIL SYMBOLS	Poss. Soil Cont.	SOIL DESCRIPTION	SAMP. No.	Rec. inch.	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			Asphalt: Asphalt			N/A	NM	N/A	
			Gravel: Gravel Sub-base			21	8-8-9-8	0.0	
5			Gravel and Sand: Light tan Sandy Gravel, moist, non-plastic, hard			11	10-12-11-12	0.0	
						12	10-8-8-9	0.0	
10						20	2-2-4-5	0.0	
						17	4-4-2-3	0.0	
15			Gravel and Sand: Same but black color			24	2-4-5-2	0.0	
						7	5-7-9-11	0.0	
20			Gravel and Sand: Same but tan color			13	9-10-11-18	0.0	
						14	9-10-25-46	0.0	
25						3	12-50/3	0.0	
				MW-5 22'-24'		16	12-10-10-12	0.0	
				MW-5 24'-26'		24	8-16-16-14	0.0	
30			Gravel and Sand: Same but saturated, borehole cleanout below 26'			NM	NM	NM	
						NM	NM	NM	
						NM	NM	NM	

Bentonite Seal

PVC Casing

Sand Pack

Screened Interval

NOTES: Weather: partly cloudy, mild

Page 1 of 1



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## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-6/SB-6

TOTAL DEPTH: 24'

### PROJECT INFORMATION

PROJECT: Tier I  
SITE LOCATION: DP&L - Dryden Rd.  
JOB NO.: 0103398A.00  
LOGGED BY: Cindy Edgington  
PROJECT MANAGER: Edward A. Council, PG  
DATES DRILLED: March 7, 2006

### DRILLING INFORMATION

DRILLING CO.: Fore Drilling Co.  
DRILLER: Robert Bender  
RIG TYPE: Diedrich D50  
METHOD OF DRILLING: Hollow stem auger  
SAMPLING METHODS: Split Spoon  
HAMMER WT./DROP: 140 lb., 30 in.

☒ Water level during drilling

☒ Water level in completed well

DEPTH	SOIL SYMBOLS	Poss. Soil Cont.	SOIL DESCRIPTION	SAMP. No.	Rec. inch.	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			Fill Material: Asphalt, Clay and Gravel		N/A	NM	N/A		
			Gravel and Sand: Light tan to brown/black Sandy Gravel, moist, non-plastic, hard		16	5-6-5-10	0.0		
5					7	7-8-9-8	0.0		
			Clay and Silt: Greenish brown Clay Silt to Silt Clay, plastic, dense, firm		11	3-3-5-3	0.0		Bentonite Seal
			Gravel and Sand: Tan brown Clay Silt Gravel, moist, dense, slightly plastic		10	8-12-12-14	0.0		
10					14	6-10-10-10	0.0		
					8	14-8-8-12	0.0		PVC Casing
15			Gravel and Sand: Same but petroleum odor at 14'	MW-6 14'-16'	14	7-12-10-12	0.0		
				MW-6 16'-18'	16	8-10-8-16	0.0		
			Gravel and Sand: Same but saturated at 18'		16	7-12-12-12	0.0		Sand Pack
20			Gravel and Sand: Borehole cleanout below 20'		NM	NM	NM		Screened Interval
					NM	NM	NM		

NOTES: Weather: partly cloudy, mild

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## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-7 (MW-C)

TOTAL DEPTH: 26'

### PROJECT INFORMATION

PROJECT: Tier 2  
SITE LOCATION: DP&L - Dryden Rd.  
JOB NO.: 0103398A.00  
LOGGED BY: Edward A. Council, PG  
PROJECT MANAGER: Edward A. Council, PG  
DATES DRILLED: May 3, 2010

### DRILLING INFORMATION

DRILLING CO.: Fore Drilling Co.  
DRILLER: Robert Bender  
RIG TYPE: Diedrich D50  
METHOD OF DRILLING: Hollow stem auger  
SAMPLING METHODS: Geoprobe 3' Acetate Sleeves  
HAMMER WT./DROP: Hydraulic Impact

☞ Water level during drilling

☞ Water level in completed well

DEPTH	SOIL SYMBOLS	Poss. Soil Cont.	SOIL DESCRIPTION	SAMP. No.	Rec. inch.	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			Clay and Silt: Brown Silty Clay to Clay Silt with minor Gravel, friable, moist and plastic.						
					10	NM	8.7		
					9	NM	4.4		
5					9	NM	4.5		
					5	NM	4.1		
			Gravel and Sand: Gray to brown Sandy Gravel to Gravel Sand, moist. More brown with depth.		7	NM	4.1		
10					16	NM	4.2		
					14	NM	4.7		
15					10	NM	4.4		
				MW-7/C 16'-18'	12	NM	7.0		
					8	NM	5.8		
20					4	NM	11.2		
					5	NM	7.2		
25			Gravel and Sand: Same, end of boring at 26 feet below ground surface.	MW-7/C 24'-26'	9	NM	91.2		

Bentonite Seal

PVC Casing

Sand Pack

Screened Interval

NOTES: weather: partly cloudy, mild

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## FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-8 (MW-D)**

TOTAL DEPTH: **26'**

### PROJECT INFORMATION

PROJECT: **Tier 2**  
SITE LOCATION: **DP&L - Dryden Rd.**  
JOB NO.: **0103398A.00**  
LOGGED BY: **Edward A. Council, PG**  
PROJECT MANAGER: **Edward A. Council, PG**  
DATES DRILLED: **May 3, 2010**

### DRILLING INFORMATION

DRILLING CO.: **Fore Drilling Co.**  
DRILLER: **Robert Bender**  
RIG TYPE: **Diedrich D50**  
METHOD OF DRILLING: **Hollow stem auger**  
SAMPLING METHODS: **Geoprobe 3' Acetate Sleeves**  
HAMMER WT./DROP: **Hydraulic Impact**

☞ Water level during drilling

☞ Water level in completed well

DEPTH	SOIL SYMBOLS	Poss. Soil Cont.	SOIL DESCRIPTION	SAMP. No.	Rec. inch.	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			Clay and Silt: Brown Silty Clay to Clay Silt with minor Gravel, friable, moist and plastic.		2	NM	14.5		
			Gravel and Sand: Gray to brown Sandy to Gravel Sand, moist.		14	NM	30.2		
5					11	NM	4.9		
					9	NM	27.1		
					14	NM	15.3		
10					14	NM	11.1		
					11	NM	5.4		
15					14	NM	60.0		
				MW-8/D 14'-16'	9	NM	4.1		
					7	NM	48.5		
20					6	NM	48.6		
					13	NM	55.1		
25			Gravel and Sand: Same, end of boring at 26 feet below ground surface.	MW-8/D 24'-26'	19	NM	85.2		

← Bentonite Seal

← PVC Casing

← Sand Pack

← Screened Interval

NOTES: Weather: partly cloudy, mild

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## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-9 (MW-E)

TOTAL DEPTH: 26'

### PROJECT INFORMATION

PROJECT: Tier 2  
SITE LOCATION: DP&L - Dryden Rd.  
JOB NO.: 0103398A.00  
LOGGED BY: Edward A. Council, PG  
PROJECT MANAGER: Edward A. Council, PG  
DATES DRILLED: May 3, 2010

### DRILLING INFORMATION

DRILLING CO.: Fore Drilling Co.  
DRILLER: Robert Bender  
RIG TYPE: Diedrich D50  
METHOD OF DRILLING: Hollow stem auger  
SAMPLING METHODS: Geoprobe 3' Acetate Sleeves  
HAMMER WT./DROP: Hydraulic Impact

≡ Water level during drilling

▼ Water level in completed well

DEPTH	SOIL SYMBOLS	Poss. Soil Cont.	SOIL DESCRIPTION	SAMP. No.	Rec. inch.	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			Clay and Silt: Brown Silty Clay to Clay Silt with minor Gravel, friable, moist and plastic.		11	NM	25.0		
					6	NM	14.3		
5					5	NM	13.9		
					13	NM	25.5		
			Gravel and Sand: Gray to brown Sandy to Gravel Sand, moist.	MW-9/E 6'-10'	10	NM	35.3		
10					12	NM	14.6		
					15	NM	34.0		
15					14	NM	14.3		
				MW-9/E 16'-18'	16	NM	39.9		
					12	NM	18.2		
20					5	NM	9.0		
			Gravel and Sand: Rock fragment or large gravel at 22', end of boring at 24 feet below ground surface.		0	NM	0.0		

Bentonite Seal

PVC Casing

Sand Pack

Screened Interval

NOTES: weather: partly cloudy, mild

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## Boring Log

Boring #: MW-10

Date Drilled: March, 28, 2012

Driller: Fore Testing

Geologist: E. Council, PG

Total Depth Drilled: 27' BGS

Drilling Methods: Geoprobe  
and HSA

Sample Interval: Every 2 to 3 foot

Sample depth ft BGS	Rec inches	Lithology	PID ppm
0'-3'	12"	0" to 6", G Sub-base	0.0
		6" to Bot, Br StSd with G. Fr, Mst, Dense, Non-plas, FILL	0.0
3'-6'	NR	NR	NR
6'-9'	NR	NR	NR
9'-12'	6"	Br SdG, NP, Dry to Moist	0.0
12'-14'	10"	Same	0.0
14'-16'	14"	Same	0.0
16'-18'	14"	Same	0.0
18'-20'	3"	SG, Wet	0.0
20'-22'	12"	Same as 16' - 18', Coarser, Wet	0.0
22'-24'	5"	Same, Wet	0.0
24'-26'	6"	Same, Wet	0.0
26'-27.4'	10"	Same, EOB at 27.4' BGS	0.0

C - Clay, SC - Silty Clay CS - Clay Silt, St - Silt, Sd - Sand, G - Gravel

Lt - Light, Dk - Dark, Med - Medium, Br - Brown

Fr - Friable, Mst - Moist, Plas - Plastic, NP - Non Plastic

Bot - Bottom, EOB - End of Boring, BGS - Below Grounds Surface

NR - No Recovery

## WELL CONSTRUCTION

Depth ft BGS	Description
27' - 17'	2" PVC Well Screen
17' - 0.25	2" PVC Riser
27' - 15'	Sand Pack
15' - 13'	Bentonite Seal
13' - 0.5'	Bentonite Grout Cement
0.5' - 0.0'	Flush mounted Cover

## Boring Log

Boring #: MW-11

Date Drilled: March, 28, 2012

Driller: Fore Testing

Geologist: E. Council, PG

Total Depth Drilled: 26' BGS

Drilling Methods: HSA

Sample Interval: Every 2 foot

Sample depth ft BGS	Rec inches	Lithology	PID ppm
0'-2'	12"	Dk Br CSd-StSd, Mst, NP, Fr, with Brick Fragments, FILL	0.0
2'-4'	10"	Same	0.0
4'-6'	6"	Same	0.0
6'-8'	8"	Same	0.0
8'-10'	10"	Br to Lt Gray SdG, Firm, Mst, Hard, Dense	0.0
10'-12'	8"	Br SdC-CSt, Plas, Firm, Mst, Hard, Dense	0.0
12'-14'	5"	0" to 4", Same	0.0
		4" to bot, Gray GSd, Firm, Mst, Hard, Dense	0.0
14'-16'	10"	Br SdC to GC with Black Ash, NP, Mst, Dense	0.0
16'-18'	4"	Same, Ash FILL	0.0
18'-20'	8"	Same	0.0
20'-22'	4"	Same, Metal at 4", FILL, Wet	0.0
22'-24'	16"	Br GSd-SdG, Firm, Mst, Hard, Dense, Wet	0.0
24'-26'	12"	Same, Wet	0.0

C - Clay, SC - Silty Clay CS - Clay Silt, St - Silt, Sd - Sand, G - Gravel

Lt - Light, Dk - Dark, Med - Medium, Br - Brown

Fr - Friable, Mst - Moist, Plas - Plastic, NP - Non Plastic

Bot - Bottom, EOB - End of Boring, BGS - Below Grounds Surface

NR - No Recovery

## WELL CONSTRUCTION

Depth ft BGS	Description
26' - 16'	2" PVC Well Screen
16' - 0.25'	2" PVC Riser
26' - 14'	Sand Pack
14' - 12'	Bentonite Seal
12' - 0.5'	Bentonite Grout Cement
0.5' - 0.0'	Flush mounted Cover

## Boring Log

Boring #: MW-12

Date Drilled: March, 28, 2012

Driller: Fore Testing

Geologist: E. Council, PG

Total Depth Drilled: 26' BGS

Drilling Methods: HSA

Sample Interval: Every 2 foot

Sample depth ft BGS	Rec inches	Lithology	PID ppm
0'-2'	1"	Gray G	0.0
2'-4'	1"	Br SdG, NP, Fri	0.0
4'-6'	8"	Gray-Bn SdG, NP, Moist, Dense, FILL	0.0
6'-8'	4"	Br Sd, NP, Dense, with Wood Fragments, FILL	0.0
8'-10'	7"	Br Sd, NP, Dense, with Brick Fragments, FILL	0.0
10'-12'	11"	Br CSd, Plas., Moist, Dense, with Brick Fragments, FILL	0.0
12'-14'	9"	0" to 3", Med Br SdG, Moist, Dense, FILL	0.0
		3" to Bot, Lt Br SdG, Moist, Dense, Firm, FILL	0.0
14'-16'	7"	Same	0.0
16'-18'	9"	Same	0.0
18'-20'	10"	Gray SdG, NP, Dense, Hard, Wet	0.0
20'-22'	8"	Same, Wet	0.0
22'-24'	7"	Same, Wet	0.0
24'-26'	3"	Same, Wet	0.0

C - Clay, SC - Silty Clay CS - Clay Silt, St - Silt, Sd - Sand, G - Gravel

Lt - Light, Dk - Dark, Med - Medium, Br - Brown

Fr - Friable, Mst - Moist, Plas - Plastic, NP - Non Plastic

Bot - Bottom, EOB - End of Boring, BGS - Below Grounds Surface

NR - No Recovery

## WELL CONSTRUCTION

Depth ft BGS	Description
26' - 16'	2" PVC Well Screen
16' - 0.25	2" PVC Riser
26' - 14'	Sand Pack
14' - 12'	Bentonite Seal
12' - 0.5'	Bentonite Grout Cement
0.5' - 0.0'	Flush mounted Cover



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## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-A/SB-A

TOTAL DEPTH: 32'

### PROJECT INFORMATION

PROJECT: Tier I  
SITE LOCATION: DP&L - Dryden Rd  
JOB NO.: 0103398A.00  
LOGGED BY: Cindy Edgington  
PROJECT MANAGER: Edward A. Council, PG  
DATES DRILLED: July 11, 2008

### DRILLING INFORMATION

DRILLING CO.: Fore Drilling Co.  
DRILLER: Robert Bender  
RIG TYPE: Diedrich D50  
METHOD OF DRILLING: 6" Hollow Stem Auger  
SAMPLING METHODS: Geoprobe 3' Acetate Sleeves  
HAMMER WT./DROP: Hydraulic Impact

☒ Water level during drilling

☒ Water level in completed well

DEPTH	SOIL SYMBOLS	Poss. Soil Cont.	SOIL DESCRIPTION	SAMP. No.	Rec. inch.	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			Asphalt: Asphalt			24	Hydr. Push	0.0	
			Gravel and Sand: tan, friable and moist			24	Hydr. Push	0.0	
						24	Hydr. Push	0.0	
5						24	Hydr. Push	0.0	
						24	Hydr. Push	0.0	
						24	Hydr. Push	0.0	
10						24	Hydr. Push	0.0	
						24	Hydr. Push	0.0	
						24	Hydr. Push	0.0	
15						24	Hydr. Push	0.0	
						24	Hydr. Push	0.0	
20						24	Hydr. Push	0.0	
			Gravel and Sand: Same but saturated	Boring A		24	Hydr. Push	0.0	
25						24	Hydr. Push	0.0	
						24	Hydr. Push	0.0	
						24	Hydr. Push	0.0	
30						24	Hydr. Push	0.0	

NOTES: weather: partly cloudy

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## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-B/SB-B

TOTAL DEPTH: 32'

### PROJECT INFORMATION

PROJECT: Tier I  
SITE LOCATION: DP&L - Dryden Rd  
JOB NO.: 0103398A.00  
LOGGED BY: Cindy Edgington  
PROJECT MANAGER: Edward A. Council, PG  
DATES DRILLED: July 11, 2008

### DRILLING INFORMATION

DRILLING CO.: Fore Drilling Co.  
DRILLER: Robert Bender  
RIG TYPE: Diedrich D50  
METHOD OF DRILLING: 6" Hollow Stem Auger  
SAMPLING METHODS: Geoprobe 3' Acetate Sleeves  
HAMMER WT./DROP: Hydraulic Impact

☒ Water level during drilling

☒ Water level in completed well

DEPTH	SOIL SYMBOLS	Poss. Soil Cont.	SOIL DESCRIPTION	SAMP. No.	Rec. inch	Blows / ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0			Asphalt: Asphalt						
			Gravel and Sand: tan, friable and moist	24	Hydr. Push	0.0			
				24	Hydr. Push	0.0			
5				24	Hydr. Push	0.0			
				0 - Rock	Hydr. Push	0.0			
				24	Hydr. Push	0.0			
10				24	Hydr. Push	0.0			
			Fill Material: black and sandy	24	Hydr. Push	0.0			
15				24	Hydr. Push	0.0			
			Gravel and Sand: friable and moist	24	Hydr. Push	0.0			
20				24	Hydr. Push	0.0			
				24	Hydr. Push	0.0			
				24	Hydr. Push	0.0			
				24	Hydr. Push	0.0			
				Boring B	24	Hydr. Push	0.0		
25			Gravel and Sand: Same but saturated	24	Hydr. Push	0.0			
				24	Hydr. Push	0.0			
				24	Hydr. Push	0.0			
				24	Hydr. Push	0.0			
30				24	Hydr. Push	0.0			

Bentonite Seal

PVC Casing

Sand Pack

Screened Interval

NOTES: weather: partly cloudy

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**Log of Boring No. GW-1**  
**S.C.S. ENGINEERS, DRYDEN ROAD, DAYTON, OHIO**

Boring Location: As shown on boring location plan      Date Started: 5-7-90  
 Surface Elevation:      Date Completed: 5-7-90

Stratum:	Description of Material	Sample # & Type	Sample Depth	Blows Per 6"	"N" Blows/ft. Or Core Rec.
0.0'	(Fill) Asphalt				
0.5'	(Fill) Brown sand and gravel, trace of cobbles - moist	1A	0.5 - 2.5	4 - 5 - 7 - 9	16
2.0'	(Fill) Foundry sand, some cobbles, trace of cinders, trace of gravel - moist	2A	2.5 - 4.5	8 - 9 - 10 - 7	17
5'		3A	4.5 - 6.5	2 - 3 - 5 - 5	10
		4A	6.5 - 8.5	9 - 4 - 3 - 4	7
10'		5A	8.5 - 10.5	4 - 5 - 4 - 6	10
		6A	10.5 - 12.5	4 - 3 - 3 - 7	10
14.0'					
15'	(Original) Medium stiff dark brown silt, some clay, trace of sand, trace of gravel - moist	7A	12.5 - 14.5	7 - 5 - 4 - 4	8
16.5'	Very dense brown sand and gravel, some cobbles, trace of silt - moist	8A	17.5 - 19.5	35 - 25 - 25 - 35	60
20'		9A	22.5 - 24.5	44 - 21 - 11 - 9	20
	(Becomes medium dense at 23.5')				
25'	(Becomes wet at 25.5')				
	(Becomes dense at 27.5')	10A	27.5 - 29.5	22 - 21 - 22 - 23	45
30'	Bottom of Boring at 31.0'				
Method: Hollow Stem Auger Technician: TA/SA Job No. 46826		Water Observations Initial Depth: 25.5' Completion Depth: 26.1' Depth After: hrs.		Type Sampler <input checked="" type="checkbox"/> A. Split-Spoon <input type="checkbox"/> B. <input type="checkbox"/> C. Shelby Tube <input type="checkbox"/> D.	

## LOG OF WELL NO. GW-1

S.C.S. ENGINEERS, DRYDEN ROAD, DAYTON, OHIO

46826	Job Number	
5-7-90	Date Installed	
TA	Technician	
---	Surface Elevation	
PVC	Riser Pipe Material	
PVC	Screen Material	
2"	Screen Diameter	
0.010"	Screen Slot Size	
31.0'	Bottom of Boring	
30.0'	Bottom of Screen	
20.0'	Top of Screen	
18.0'	Top of Sand	
16.0'	Top of Bentonite Pellet	
0.7'	Top of Bentonite Powder	
0.0'	Top of Concrete	
2.5'	Top of Soil Backfill	
0.4'	Top of Well Riser Pipe	
0.0'	Top of M.H. Cover	
25.5'	Initial Water Depth	
26.1'	Completion of Water Depth	
	24 Hour Water Depth	
	48 Hour Water Depth	
	Hour Water Depth	
	Remarks:	

**Log of Boring No. GW-2**  
**S.C.S. ENGINEERS, DRYDEN ROAD, DAYTON, OHIO**

Boring Location: As shown on boring location plan      Date Started: 5-8-90  
 Surface Elevation:      Date Completed: 5-8-90

Stratum:	Description of Material	Sample # & Type	Sample Depth	Blows Per 6"	"N" Blows/ft. Or Core Rec.
0.0'	(Fill) Asphalt				
0.2'	(Fill) Brown sand and gravel, some silt - moist	1A	0.5 - 2.5	7-10-11-16	27
2.0'	(Fill) Medium dense brown sand and gravel, trace of silt, trace of cobbles - moist	2A	2.5 - 4.5	26-21-19-16	35
5'		3A	4.5 - 6.5	9-13-14-10	24
6.0'	(Fill) Black cinders and foundry sand - moist	4A	6.5 - 8.5	6-4-4-5	9
7.5'	(Fill) Medium stiff brown silt and clay, trace of gravel - moist				
8.5'	(Fill) Black cinders and foundry sand - moist	5A	8.5 - 10.5	4-5-5-6	10
10'		6A	10.5 - 12.5	4-4-2-4	6
15'		7A	12.5 - 14.5	7-5-5-4	9
16.0'	(Original) Dark brown silt, some sand, some clay - moist				
17.5'	Medium dense brown sand and gravel, trace of silt, trace of cobbles - moist	8A	17.5 - 19.5	12-14-15-12	27
20'					
	(Becomes very dense at 23.5')	9A	22.5 - 24.0	22-23-110	100+
25'	(Becomes wet at 25.8')				
		10A	27.5 - 29.5	25-44-35-42	77
30'	Bottom of Boring at 31.5'				

Method: Hollow Stem Auger  
 Technician: TA/SA  
 Job No. 46826

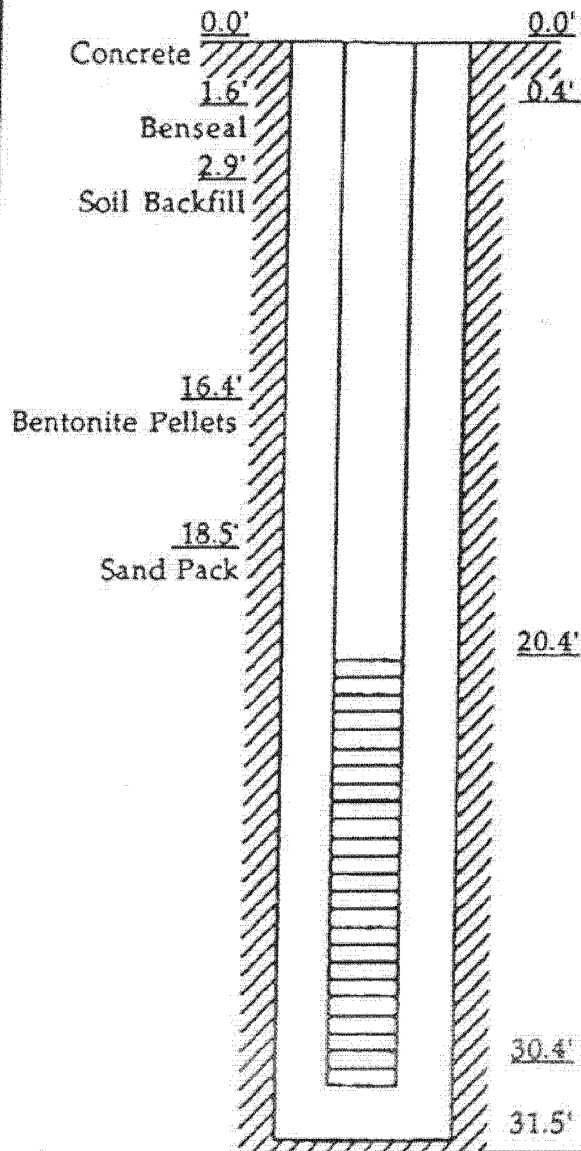
**Water Observations**  
 Initial Depth: 25.8'  
 Completion Depth: 25.3'  
 Depth After: hrs.

**Type Sampler**  
☒ A. Split-Spoon  
☐ B.  
☐ C. Shelby Tube  
☐ D.

# LOG OF WELL NO. GW-2

S.C.S. ENGINEERS, DRYDEN ROAD, DAYTON, OHIO

46826	Job Number
5-8-90	Date Installed
TA	Technician
---	Surface Elevation
PVC	Riser Pipe Material
PVC	Screen Material
2"	Screen Diameter
0.010"	Screen Slot Size
31.5'	Bottom of Boring
30.4'	Bottom of Screen
20.4'	Top of Screen
18.5'	Top of Sand
16.4'	Top of Bentonite Pellet
1.6'	Top of Bentonite Powder
0.0'	Top of Concrete
2.9'	Top of Soil Backfill
0.4'	Top of Well Riser Pipe
0.0'	Top of M.H. Cover
25.8'	Initial Water Depth
25.3'	Completion of Water Depth
	24 Hour Water Depth
	48 Hour Water Depth
	Hour Water Depth



Remarks:

**Log of Boring No. GW-3**  
**S.C.S. ENGINEERS, DRYDEN ROAD, DAYTON, OHIO**

Boring Location: As shown on boring location plan  
 Surface Elevation:

Date Started: 5-8-90  
 Date Completed: 5-8-90

Stratum:	Description of Material	Sample # & Type	Sample Depth	Blows Per 6"	"N" Blows/ft. Or Core Rec.
0.0'	(Fill) Dense brown sand and gravel, <u>some cobbles, trace of silt - moist</u> (Becomes very dense at 2.0')	1A	0.0 - 2.0	7-11-13-20	33
2.0'		2A	2.0 - 4.0	24-32-37-21	58
4.0'		3A	4.0 - 5.9	16-16-90- 70/4"	100+
6.5'	(Fill) Cinders and foundry sand, - moist (Trace of glass at 8.5')	4A	6.0 - 8.0	27-8-7-5	12
10'	(Trace of water at 10.0')	5A	8.0-10.0	8-3-1-2	3
12.0'		6A	10.0-12.0	3-3-3-3	6
13.0'	(Trace of water at 13.0')	7A	12.0-14.0	3-2-2-2	4
14.0'	(Trace of metal and glass at 14.0')	8A	14.0-16.0	6-6-8-9	17
16.0'		9A	16.0-18.0	12-16-16-16	32
18.0'	(Original) Dense brown sand and gravel, trace of silt, trace of cobbles - moist	10A	18.0-20.0	21-33-26-18	44
20.0'		11A	23.0-25.0	14-14-16-16	32
26.7'	(Becomes wet at 26.7')	12A	28.0-30.0	13-28-21-16	37
30'	Bottom of Boring at 33.0'				

Method: Hollow Stem Auger  
 Technician: TA/SA  
 Job No. 46826

Water Observations

Initial Depth: 26.7'  
 Completion Depth: 27.4'  
 Depth After: hrs.

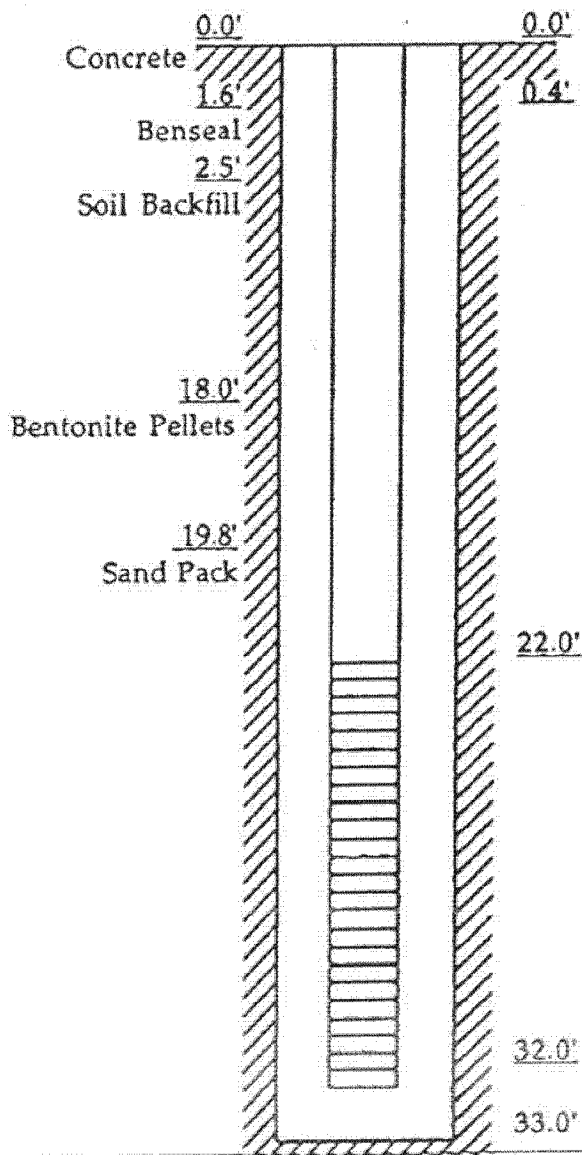
Type Sampler

☒ A. Split-Spoon  
☐ B.  
☐ C. Shelby Tube  
☐ D.

## LOG OF WELL NO. GW-3

S.C.S. ENGINEERS, DRYDEN ROAD, DAYTON, OHIO

46826	Job Number
5-8-90	Date Installed
TA	Technician
--	Surface Elevation
PVC	Riser Pipe Material
PVC	Screen Material
2"	Screen Diameter
0.010"	Screen Slot Size
33.0'	Bottom of Boring
32.0'	Bottom of Screen
22.0'	Top of Screen
19.8'	Top of Sand
18.0'	Top of Bentonite Pellet
1.0'	Top of Bentonite Powder
0.0'	Top of Concrete
2.5'	Top of Soil Backfill
0.4'	Top of Well Riser Pipe
0.0'	Top of M.H. Cover
26.7'	Initial Water Depth
27.4'	Completion of Water Depth
	24 Hour Water Depth
	48 Hour Water Depth
	Hour Water Depth



Remarks:

Client: Dayton Power & Light  
 Location: Dayton, Ohio  
 Date Drilled: 07/28/94  
 Drilled by: United Geosciences

Surface Elevation: 11, MSL  
 Coordinates: N : E  
 Total borehole depth: 34 ft.  
 Logged by: Jim O'Brien

MONITORING WELL WP-4, GW-4  
 Project No: 0590005.03

# SCS ENGINEERS

Well Construction

DEPTH (ft)	ELEVATION (ft, MSL)	SAMPLE INTERVAL (ft)	% RECOVERY	BLOWS	HEADSPACE (ppt)	SYMBOL LOG	DESCRIPTION	Concrete
5							Brown fill with rock and gravel.	
10							Black fly ash fill, contains metal, brick and miscellaneous debris.	
15								
20							GRAVEL with rock and cobbles (GP).	
25								
30		WP-4A	50		0.5		SAND and GRAVEL with rock, wet (SP). Water has a petroleum odor.	
35							Boring terminated at 34 ft on 7/28/94. Set well point from 29 to 32 ft.	
40								

Client: Dayton Power & Light  
 Location: Dayton, Ohio  
 Date Drilled: 07/28/94  
 Drilled by: United Geosciences

Surface Elevation: 11. MSL  
 Coordinates: N ; E  
 Total borehole depth: 34 ft.  
 Logged by: Jim O'Brien

MONITORING WELL WP-5, GW-5  
 Project No: 0590005.03

# SCS ENGINEERS

## Well Construction

DEPTH (ft.)	ELEVATION (ft. MSL)	SAMPLE INTERVAL (ft.)	% RECOVERY	BLOWS	HEADSPACE (ppm)	SYMBOL LOG	DESCRIPTION	Concrete
5							Dense rock and gravel fill.	
10							GRAVEL with rock and cobbles (GP).	
15								
20							Brown SAND and coarse GRAVEL (SP).	
25								
30		WP-5A	75		5.0		Becomes rocky at 28 ft. wet. Water has a petroleum odor.	
35							Boring terminated at 34 ft on 7/28/94. Set well point from 31 to 34 ft.	
40								



Client: Dayton Power & Light  
 Location: Dayton, Ohio  
 Date Drilled: 07/29/94  
 Drilled by: United Geosciences

Surface Elevation: ft. MSL  
 Coordinates: N ; E  
 Total borehole depth: 34 ft.  
 Logged by: Jim O'Brien

MONITORING WELL WP-7, GW-6  
 Project No: 0590005.03

SCS ENGINEERS

Well Construction

DEPTH (ft.)	ELEVATION (ft. MSL)	SAMPLE INTERVAL (ft.)	% RECOVERY	BLOWS	HEADSPACE (ppm)	SYMBOL LOG	DESCRIPTION	Concrete	Bentonite Seal	Qtz. Sand Filter Pack	2-in. Sch. 40 PVC Riser Pipe	2-in. Sch. 40 PVC Well Screen	0.01 in. Slotted
5							Brown SAND and GRAVEL, with rock (GP).						
10							Loses sand at 8 ft, more gravelly.						
15													
20													
25													
30		WP-7A	50		2.0		Becomes rocky and sandy at 28 ft, wet.  Water has strong petroleum odor.						
35							Boring terminated at 34 ft on 7/29/94. Set well point from 31 to 34 ft.						
40													

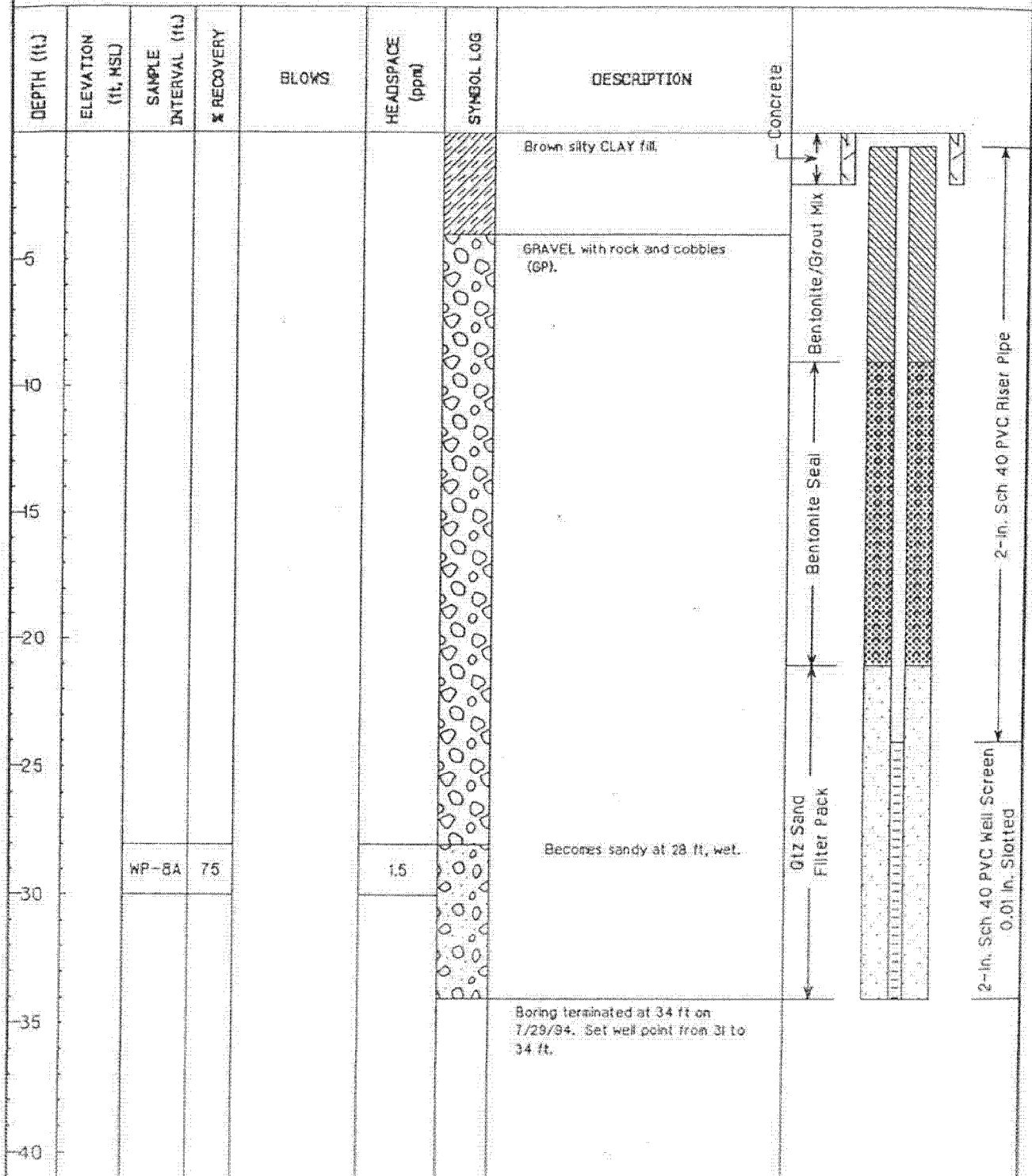
Client: Dayton Power & Light  
 Location: Dayton, Ohio  
 Date Drilled: 07/29/94  
 Drilled by: United Geosciences

Surface Elevation: ft, MSL  
 Coordinates: N : E  
 Total borehole depth: 34 ft.  
 Logged by: Jim O'Brien

MONITORING WELL WP-8, GW-7  
 Project No: 0590005.03

SCS ENGINEERS

Well Construction



Client: Dayton Power & Light  
 Location: Dayton, Ohio  
 Date Drilled: 07/30/94  
 Drilled by: United Geosciences

Surface Elevation: ft, MSL  
 Coordinates: N : E  
 Total borehole depth: 34 ft.  
 Logged by: Jim O'Brien

MONITORING WELL WP-10, GW-8  
 Project No: 05900005.03

SCS ENGINEERS

Well Construction

DEPTH (ft.)	ELEVATION (ft. MSL)	SAMPLE INTERVAL (ft.)	% RECOVERY	BLOWS	HEADSPACE (ppm)	SYMBOL LOG	DESCRIPTION	Well Construction
5						Rock and gravel.		Concrete
10						Black fly ash fill.		Bentonite/Grout Mix
15						GRAVEL with rock and cobbles (GP).		Bentonite Seal
20								
25								
30		WP-10A	75		1.0	SAND and GRAVEL, wet (SP).		Gravel Sand Filter Pack
35						Boring terminated at 34 ft on 7/30/94. Set well point from 31 to 34 ft.		2-in. Sch 40 PVC Well Screen 0.01 in. Slotted
40								

Page 1 of 1



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 2

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-74-02  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: BH03-13  
DATE COMPLETED: June 13, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. TEEPEN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	ASPHALT							
2	SW-SAND (FILL), coarse gravel, brick fragments, loose, medium sand, well graded, brown, dry	1.00		1GP		3.0		0.0
4								0.0
6								0.0
6	ML-SILT (FILL), trace fine gravel, fine grained	6.50						0.0
8	SW-SAND (FILL), coarse gravel fragments, loose, medium sand, well graded, tan/brown, dry	7.50		2GP		2.8		0.0
10								0.0
12	SP-SAND (FILL), medium sand, poorly graded, brown	11.00						0.0
12	SW-SAND (native), fine gravel fragments, loose, medium sand, well graded, brown/tan, dry	11.50		3GP		3.4		0.0
14								0.0
16	- 0.25' coarse gravel layer at 16.5ft BGS							0.0
18				4GP		4.0		0.0
20								0.0
22	- Wet, increasing moisture with depth at 21.8ft BGS			5GP		2.3		0.0
24								0.0
26								0.0
28	- orange sand, 0.5' thick at 27.0ft BGS			6GP		2.3		0.0
30								0.0
32								0.0
32	CL-CLAY (till), very stiff, fine grained, medium plasticity, dark gray, moist	32.40		7GP		5.0		0.0
34								0.0
34	SW-SAND (native), trace fine gravel, compact, medium sand, well graded, brown/tan, moist	34.40						0.0
36								0.0
38				8GP		3.7		0.0
<b>NOTES:</b> MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE WATER FOUND ∇								

OVERBURDEN LOG 038443-74-02 QJ1 PHASE 1A BOREHOLES.GPJ CRA\_CORP.GDT 1/9/14




# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 2 of 2

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-74-02  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: BH03-13  
DATE COMPLETED: June 13, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. TEEPEN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
40	- black layer, chemical odor from 40.7 to 42.1ft BGS							0.0
42				9GP		2.9		0.0
44								637
46								0.0
48	- 1.33' black layer at 47.0ft BGS			10GP		3.4		0.0
50								0.0
52				11GP		2.9		0.0
54								0.0
56								0.0
58	CL-CLAY (till), stiff, fine grained, high plasticity, gray, moist	57.00		12GP		3.0		0.0
60	SW-SAND (native), coarse gravel fragments, medium sand, well graded, brown/tan, moist	58.00						0.0
60	END OF BOREHOLE @ 60.0ft BGS	60.00						
62	Temporary well screened from 22.75 to 26.75ft BGS. Screen removed and backfilled on June 14, 2013.							
64	Depth: 21.75-23.75ft BGS Sudan IV test results:negative PID Headspace (ppm): 0							
66	Depth: 30.4-32.4ft BGS Sudan IV test results:negative PID Headspace (ppm): 0							
68	Depth: 34.4-35ft BGS Sudan IV test results:negative PID Headspace (ppm): 0							
70	Depth: 40.66-42.66ft BGS Sudan IV test results: positive PID Headspace (ppm): 637							
72								
74								
76								

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
WATER FOUND ∇

OVERBURDEN LOG 038443-74-02 QU1 PHASE 1A BOREHOLES.GPJ CRA\_CORP.GDT 1/9/14



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-74-02  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: BH04-13  
DATE COMPLETED: June 14, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	ASPHALT	0.25						
2	SW-SAND (FILL), loose, fine to medium sand, well graded, dark brown, dry	1.30		1GP		4.0		0.4
	SM-SAND/SILT (FILL), compact, fine to medium sand, dark brown, dry	1.60						0.0
4	SW-SAND (FILL), loose, fine to medium sand, well graded, dark brown, dry	2.30						
	SM-SAND/SILT (FILL), compact, fine to medium sand, dark brown, dry	2.70						
6	SW-SAND (FILL), loose, fine to medium sand, well graded, dark brown, dry							
	SM-SAND/SILT (FILL), compact, fine to medium sand, dark brown, dry							
8	SW-SAND (FILL), loose, fine to medium sand, well graded, dark gray/black, dry - orange/red clay dust at 4.0ft BGS			2GP		3.6		0.0
10								0.0
								6.2
12	SM-SAND/SILT (FILL), compact, fine to medium sand, dark brown, dry	11.00		3GP		3.5		76.6
14	- 2" thick medium to coarse sand seam, with fine gravel, loose at 14.0ft BGS							
16	SW-SAND (native), little fine gravel, fine, medium and coarse sand, loose, well graded, tan/brown, dry	15.20		4GP		4.0		3.8
18								0.2
20	- Wet at 20.3ft BGS							0.2
22				5GP				0.0
24								0.0
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	Temporary well screened from 21.3 to 25.3ft BGS. Screen removed and backfilled on June 14, 2013.							
30	Depth: 20.3-22.3ft BGS Sudan IV test results:negative PID Headspace (ppm): 0							
32								
34								
36								
38								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
WATER FOUND ∇

OVERBURDEN LOG 038443-74-02 QU1 PHASE 1A BOREHOLES.GPJ CRA CORP.GDT 1/9/14



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 3

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-74-02  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: BH05-13  
DATE COMPLETED: June 13, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
2	SW-SILTY SAND (FILL), slightly compact, fine, medium and coarse sand, well graded, black-brown, dry - cobble fragments at 1.0ft BGS			1GP		4.0		0.0
4	- red clay brick dust (slag-like material) at 3.0ft BGS							
6	- nail at 5.5ft BGS			2GP		3.5		0.0
8	- 1.5" silt lens, with sand at 6.8ft BGS - 2" slag-like material at 7.0ft BGS							
10								
12	SM-CLAYEY SILT/SAND (FILL), trace fine gravel, compact, fine sand, dark brown, dry - fine to medium sand at 11.2ft BGS	11.00		3GP		1.5		11.5
14								
16	SW-SILTY SAND (FILL), fine, medium and coarse sand, well graded, loose, black/brown, dry	15.00		4GP		2.0		0.0
18								
20	- wet at 20.0ft BGS							
22	SW-SAND (native), little to some silt, trace fine gravel, medium to coarse sand, fine sand, well graded, loose, brown, dry to wet	21.00		5GP		2.5		0.0
24								

OVERBURDEN LOG 038443-74-02 OU1 PHASE 1A BOREHOLES.GPJ CRA CORP.GDT 1/9/14

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
WATER FOUND ∇

BACKFILLED WITH BENTONITE CHIPS



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 2 of 3

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-74-02  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: BH05-13  
DATE COMPLETED: June 13, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
26								
28				6GP		2.8		0.0
30								
32	CL-SILTY CLAY (TILL), trace coarse sand, cohesive, low plasticity, gray, dry	32.00		7GP		4.0		0.5
34								
36								
38				8GP		5.0		0.0
40	SP-SAND (native), loose, fine to medium sand, poorly graded - increase in fine gravel content at 40.5ft BGS	39.20						
42				9GP		4.0		0.0
44								
46								
48				10GP		3.7		
								0.7

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
WATER FOUND  $\nabla$

OVERBURDEN LOG 038443-74-02 OU1 PHASE 1A BOREHOLES.GPJ CRA CORP.GDT 1/9/14





# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 3 of 3

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-74-02  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: BH05-13  
DATE COMPLETED: June 13, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
52	- fine to medium sand from 51.5 to 53.0ft BGS - solvent odor from 52.0 to 60.0ft BGS			11GP		3.7		27
54	- medium to coarse sand, with fine gravel at 53.0ft BGS							833
56	- dark gray staining from 55.5 to 57.0ft BGS							407
58				12GP		3.7		
60	END OF BOREHOLE @ 60.0ft BGS	60.00						123
62	Temporary well screened from 21.0 to 25.0ft BGS. Screen removed and backfilled on June 14, 2013.							
64	Depth: 20-22ft BGS Sudan IV test results:negative PID Headspace (ppm): 0							
66	Depth: 31-32ft BGS Sudan IV test results:negative PID Headspace (ppm): 0.5							
68	Depth: 39.2-40ft BGS Sudan IV test results:negative PID Headspace (ppm): 0							
70	Depth: 53-55ft BGS Sudan IV test results:positive PID Headspace (ppm): 833							
72	Depth: 55-57ft BGS Sudan IV test results:negative PID Headspace (ppm): 407							
74								

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
WATER FOUND ∇

OVERBURDEN LOG 038443-74-02 OUT PHASE 1A BOREHOLES.GPJ CRA\_CORP.GDT 1/9/14




# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443-74-02  
CLIENT: PRP GROUP  
LOCATION: MORaine, OH

HOLE DESIGNATION: BH06-13  
DATE COMPLETED: June 13, 2013  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
2	SW-SAND (FILL), fine grained gravel, fine, medium and coarse sand, loose, well graded, brown, dry	1.00		1GP		4.5		0.0
4	ML-SILT (FILL), very stiff, brown, dry - sand, fine gravel and red clay at 2.5ft BGS - gray at 3.0ft BGS							0.0
6				2GP		4.3		0.0
8								0.0
10	SW-SILTY SAND (FILL), trace clay, fine, medium and coarse sand, loose, well graded, dark brown/black, dry	9.00		3GP		2.0		0.0
12								0.0
14								0.0
16	- brown/tan at 16.5ft BGS			4GP		2.0		0.0
18								0.0
20	- pieces of granite fragments at 20.0ft BGS - Wet at 21.0ft BGS			5GP		2.2		0.0
22								0.0
24								0.0
26	END OF BOREHOLE @ 26.0ft BGS	26.00						
28	Temporary well screened from 22.0 to 26.0ft BGS. Screen removed and backfilled on June 13, 2013.							
30	Depth:21-23ft BGS Sudan IV test results:negative PID Headspace (ppm): 0							
32								
34								
36								
38								

OVERBURDEN LOG 038443-74-02 QU1 PHASE 1A BOREHOLES.GPJ CRA CORP.GDT 1/9/14

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
WATER FOUND ∇

# **Appendix E**

## **Revision 1 – Addendum 2 – VI Mitigation Work Plan**



## **Revision 1, Addendum 2 - VI Mitigation Work Plan**

**South Dayton Dump and Landfill Site  
Moraine, Ohio**

Submitted to:  
US EPA Region 5  
Emergency Response Branch  
Cincinnati, OH  
OSC Steve Renninger

651 Colby Drive Waterloo Ontario N2V 1C2 Canada  
038443 | 62 | 01 | Report No 18 | December 2016

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Table 1	GP-2 Field Monitoring Values (November 2012 to November 2016)
Table 2	Building 15 (SIM Trainer) Field Monitoring Values (January 2012 to January 2016)

## Table Index

Table 2.1	Five-Tiered Sampling Plan for Sub-slab Soil Vapor Monitoring at Building 15 (SIM Trainer).....	3
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# 1. Introduction

This addendum to the Vapor Intrusion (VI) Mitigation Work Plan (CRA, May 2013) for the South Dayton Dump and Landfill Site (Site), Moraine, Ohio is intended to update the existing VI Mitigation Work Plan to describe proposed sampling activities required to measure explosive limits in utility corridors during seasonal periods of elevated methane levels. Revision 1 of the Addendum provides an update to remove obligations of Respondents to monitor soil gas probes that contain elevated levels of contaminants that are not associated with the Site.

This addendum is intended to be used in conjunction with the VI Mitigation Work Plan and is not a stand-alone document.

# 2. Sampling Activities

## 2.1 Landfill Gas and Soil Vapor Sampling

The VI Mitigation Work Plan outlines the measurement and recording of methane levels using a portable combustible gas meter, specifically LandTec GEM 2000 or equivalent, which is capable of reporting the concentration of methane in units of percentage of the LEL of methane (i.e., 0 to 100 percent of LEL). The Work Plan did not specify an end date with regards to methane monitoring but the Respondents continued to monitor methane on a weekly basis between January 19, 2012, and April 2, 2014 in Building 15 (SIM Trainer) and between November 9, 2012 and April 2, 2014 in USEPA nested soil gas probe GP-2, in response to noted periods of elevated methane levels. During the VI mitigation conference call held on March 6, 2014, USEPA and the Respondents agreed to reduce the frequency of methane monitoring from weekly to monthly, conditional on the Respondents' submission of a plan detailing sampling activities to measure explosive limits in utility corridors during seasonal periods of elevated methane levels.

The USEPA (2005) document Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Landfills states that warm landfill temperatures favor methane production, which may be affected by seasonal temperature fluctuations in cold climates where fill is shallow and sensitive to ambient temperatures, and that the highest methane concentrations occur in the warmer summer months. The Minnesota Pollution Control Agency (2011) document Guidelines for Monitoring for Landfill Gas at and Near Former Dumps states that methane generation can be non-existent at temperatures below 50°F. A review of methane results at GP-2 between November 2012 and November 2016 indicates that methane concentrations generally increase between June and October every year, with values exceeding 100 percent of LEL (i.e., greater than 5 percent methane by volume, in air) in the months of July, August, and September (Table 1). The increase in methane corresponds to an increase in ambient temperature throughout the summer months. On behalf of the Respondents, GHD submitted a letter to USEPA and Ohio EPA dated October 24, 2016, detailing evidence that the source of methane at GP-2 is not related to the South Dayton Dump and Landfill Site. Supporting evidence includes the consistent non-detectable levels of methane at soil gas probes along the Dryden Road Site boundary which demonstrate the lack of off-Site migration of methane; the proximity of GP-2 to the Dayton Power and Light (DP&L) Transportation Center and area former USTs; and stratigraphic conditions that do not encourage the lateral movement of subsurface soil gas along preferential pathways. The Respondents revised this addendum to

remove methane monitoring at locations which exhibit contamination that is not associated with the Site (e.g., GP-2).

Methane results for Building 15 (SIM Trainer) are presented in Table 2. Prior to the installation of the sub-slab depressurization system (SSDS) on January 9, 2014, methane concentrations were consistently greater than 10 percent of the LEL (0.5 percent methane) at sub-slab soil vapor Probe C (i.e. SS-15-C). The greatest methane concentrations, approximately 40-60 percent of the LEL (2 to 3 percent methane), were recorded during the warmer months of July, August, September, and October in 2012 and 2013. Respondents installed a permanent explosive gas monitor in Building 15 (SIM Trainer) on January 31, 2013 for continuous indoor air monitoring in addition to the weekly methane monitoring events. Since the SSDS system has been in operation, methane values have decreased and consistently ranged from 1.5 percent of the LEL (0.05 to 0.25 percent methane).

From 2012 to 2016, the Respondents conducted methane monitoring from soil gas probe GP-2 on a four tiered sampling system based on information provided in the USEPA (2005) and Minnesota Pollution Control Agency (2011) documents, and historical methane monitoring results completed at GP-2. Based on the apparent lack of connection between the Site and GP-2, Respondents will cease routine methane monitoring at GP-2 following USEPA approval of this Revision 1 to Addendum 2.

Methane monitoring will be conducted from sub-slab soil vapor probes (SSSVs) at Building 15 (SIM Trainer) on a three-tiered sampling system based on information provided in the USEPA (2005) and Minnesota Pollution Control Agency (2011) documents, and historical methane results for Building 15 (SIM Trainer). Tier 1 sampling will be conducted monthly during periods where methane values in the SSSVs are less than 10 percent of the LEL (0.5 percent methane by volume in air). Tier 2 sampling will be collected biweekly when methane values in the SSSVs are between 10 and 100 percent of the LEL (0.5 to 5 percent methane) and Tier 3 sampling will be completed when methane values in the SSSVs are greater than 100 percent of the LEL (5 percent methane). The detection of methane in any of the SSSVs at values greater than 10 percent of the LEL (0.5 percent methane) will increase the monitoring plan frequency from Tier 1 to Tier 2 status (monthly to biweekly sampling). When methane values in all of the SSSVs decrease to less than 10 percent of the LEL (0.5 percent methane), methane monitoring frequency will decrease from Tier 2 biweekly sampling to Tier 1 monthly sampling. Similarly, the detection of methane in any of the SSSVs at values greater than 100 percent of the LEL (5 percent methane) will increase the monitoring plan frequency to Tier 3 status (weekly sampling). Weekly sampling will continue until methane levels in all SSSVs are reduced to less than 100 percent of the LEL (5 percent methane). If the Building 15 SSSV methane levels remain less than 10 percent of the LEL (0.5 percent methane) for three consecutive months, the monitoring frequency will decrease from Tier 1 monthly sampling to Tier 4 semi-annual sampling (i.e., in January and July). If the Building 15 SSSV Tier 4 semi-annual methane levels remain less than 10 percent of the LEL (0.5 percent methane) for 2 calendar years (i.e., sample rounds), methane monitoring frequency will decrease from Tier 4 semi-annual sampling to Tier 5 annual sampling. The five tiered sampling plan for Building 15 (SIM Trainer) sub-slab soil vapor probes is outlined in Table 2.1.

**Table 2.1 - Five-Tiered Sampling Plan for Sub-slab Soil Vapor Monitoring at Building 15 (SIM Trainer)**

	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5
Triggering Condition	Methane levels less than 10 percent of the LEL (0.5 percent methane) in all SSSVPs	Methane levels between 10 and 100 percent of the LEL (0.5 to 5 percent methane) in any SSSVP.	Methane levels greater than 100 percent of the LEL (5 percent methane) in any SSSVP	3 consecutive months of methane levels less than 10 percent of the LEL (0.5 percent methane)	2 years of methane levels less than 10 percent of the LEL (0.5 percent methane)
Action	Monthly sampling	Biweekly sampling	Weekly sampling	Semi-annual sampling	Annual sampling
Exit Condition	If methane levels are less than 10 percent of the LEL (0.5 percent methane) in all SSSVPs for 3 consecutive months, decrease frequency to semi-annual monitoring (Tier 4)	Methane levels less than 10 percent of the LEL in all SSSVPs (0.5 percent methane). Resume Tier 1 sampling.	Methane levels less than 100 percent of the LEL in all SSSVPs (5 percent methane) Resume Tier 2 sampling.	If methane levels are less than 10 percent of the LEL (0.5 percent methane) for 2 years (i.e., 4 sample rounds), decrease frequency to annual monitoring (Tier 5)	Reevaluate the potential for landfill gas migration and VI during the Remedial Design/Remedial Action. End sampling following implementation of the Remedial Action

The Respondents will reevaluate the potential for landfill gas migration and vapor intrusion during the Remedial Design/Remedial Action, and additional actions will be taken if required.

### 2.1.1 Soil Vapor Sampling in Utility Corridors

Respondents obtained and reviewed buried utility information provided by Ohio Utilities Protection Services (OUPS) in order to examine the possibility of preferential gas migration pathways to GP-2. The location of buried utilities were summarized in the GHD memorandum to USEPA and Ohio EPA dated September 21, 2016,

In September 2016, GHD completed a visual inspection and methane monitoring at three pairs of storm water inlets, four manholes, and one sanitary manhole located along Dryden Road in the area of GP-2. From the visual inspection, GHD determined that storm water flows from east to west across Dryden Road, and then north.

On September 28, 2016 and October 7, 2016, GHD completed methane monitoring at the storm water inlets and manholes in the vicinity of GP-2; methane was not detected at these locations. After the installation of the SSDS on January 9, 2014, at Building 15 (SIM Trainer), methane levels in SSSVPs have been consistently measured between 0 to 10 percent of the LEL (0 to 0.5 percent methane). The Respondents propose that results of methane monitoring from Building 15 (SIM Trainer) SSSVPs SS-15-A, SS-15-B, and SS-15-C be used as a screening tool to determine when



additional methane monitoring will be completed at nearby soil gas probes. Any detection of methane at any Building 15 (SIM Trainer) SSSVPs at concentrations greater than 10 percent of the LEL (0.5 percent methane) will require an immediate sampling round consisting of adjacent USEPA nested soil gas probe GP-3 and on Site landfill gas probes GP14-09 and GP15-09, henceforth referred to as Building 15 area probes. All Building 15 area probes where methane values are greater than 10 percent of the LEL (0.5 percent methane) will then require biweekly sampling until methane values are less than 10 percent of the LEL (0.5 percent methane). Weekly sampling will be completed at any Building 15 area probe where methane values are greater than 100 percent of the LEL (5 percent methane) and detection of methane at levels greater than 100 percent of the LEL (5 percent methane) for two consecutive rounds will result in soil gas screening and/or sampling of utility corridors adjacent to the probe(s) in exceedance (see below for sampling techniques). Further action will not be required at any Building 15 area probes where methane values are less than 10 percent of the LEL (0.5 percent methane). Building 15 (SIM Trainer) SSSVPs will continue to be sampled for methane in accordance with the criteria outlined in Table 2.1.

Once the conditions for additional methane monitoring in the adjacent utility corridors have been met (described above), the Respondents propose either of the following methods be used for utility corridor sampling along the Site boundary. The first method requires soil vapor monitoring within sewers and the associated manholes, as discussed in the Wisconsin Department of Natural Resources Guidance for Documenting the Investigation of Utility Corridors (2013). Soil vapor sampling within manholes and sewers along the Site boundary will be conducted by lowering a portable combustible gas analyzer into the manhole/sewer. In the event where GHD field staff is unable to access the manhole/sewer, they will fill a Tedlar bag using a lung sampler with a long probe, which will then be field screened for methane. The second method involves installation of soil gas probes within or near identified utility corridors. This option would be used when it was not possible to access the utility via a manhole or other means of access. GHD will install soil gas probes in the bedding material surrounding the underground utility(ies) located along the Site boundary, via hand digging. Weekly monitoring will be conducted at the newly installed soil gas probe locations to determine when conditions have stabilized and equilibrium has been re-established prior to completion of methane monitoring. Soil gas sampling from the newly installed soil gas probes will be conducted as outlined in the GHD Field Sampling Plan (GHD, 2016).

The detection of methane at levels greater than 100 percent of the LEL (5 percent methane) from sampled utility corridors along the Site boundary will require the Respondents to pursue further remedial action in order to lower Site related methane levels to below the LEL. In the event that Respondents measure methane levels greater than 100 percent of the LEL at soil gas probes along the Site boundary, Respondents will collect methane measurements from soil gas probes located along the east side of Dryden Road (i.e., GP-2 and/or GP-5) as a screening and evaluation tool to determine follow-up actions.



Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	11/9/2012	13:54	--	4.1	10.6	0.0	0	30s - 40s	none		
GP-2 (12') with filter		--	--	5.6	9.1	0.0	0				
GP-2 (16') without filter		--	--	2.0	11.6	0.0	0				
GP-2 (16') with filter		--	--	4.6	10.0	0.0	0				
GP-2 (12') without filter	11/15/2012	15:04	0.0	2.4	10.8	0.0	0	30s - 40s	none		
GP-2 (12') with filter		--	0.0	2.3	10.3	0.0	0				
GP-2 (16') without filter		15:09	0.0	1.0	11.8	0.0	0				
GP-2 (16') with filter		--	0.0	0.9	11.4	0.0	0				
GP-2 (12') without filter	11/20/2012	14:35	0.0	2.2	11.3	0.0	0	50s	Trace		
GP-2 (12') with filter		--	0.0	2.1	11.0	0.0	0				
GP-2 (16') without filter		14:40	0.0	0.9	12.1	0.0	0				
GP-2 (16') with filter		--	0.0	0.8	11.9	0.0	0				
GP-2 (12') without filter	11/29/2012	13:53	0.0	4.3	11.0	0.0	0	40s - 50s	none		
GP-2 (12') with filter		--	0.0	4.7	11.2	0.0	0				
GP-2 (16') without filter		13:58	0.0	2.1	12.1	0.0	0				
GP-2 (16') with filter		13:58	0.0	2.0	11.9	0.0	0				
GP-2 (12') without filter	12/4/2012	16:03	0.0	6.6	9.6	0.0	0	50s	rainy (~0.3 inches)		
GP-2 (12') with filter		--	0.0	6.7	8.5	0.0	0				
GP-2 (16') without filter		16:08	--	6.1	10.3	0.0	0				
GP-2 (16') with filter		--	--	6.4	9.2	0.0	0				
GP-2 (12') without filter	12/13/2012	13:44	0.0	6.6	9.7	0.0	0	40s	none		
GP-2 (12') with filter		--	0.0	6.9	9.3	0.1 U	2 U				
GP-2 (16') without filter		13:39	0.0	3.7	11.8	0.0	0				
GP-2 (16') with filter		--	0.0	4.1	10.2	0.1 U	2 U				
GP-2 (12') without filter	12/18/2012	13:30	0.0	8.2	9.2	0.0	0	40s	none		
GP-2 (12') with filter		--	0.0	8.1	8.9	0.0	1 <sup>[1]</sup>				
GP-2 (16') without filter		--	0.0	5.8	10.8	0.0	0				
GP-2 (16') with filter		--	0.0	5.7	10.4	0.0	1 <sup>[1]</sup>				
GP-2 (12') without filter	1/24/2013	15:34	0.0	19.9	2.6	0.0	0.0	20s	none		
GP-2 (12') with filter		15:34	0.0	18.6	2.2	0.0	0.0				
GP-2 (16') without filter		15:40	0.0	15.3	7.7	0.0	0.0				
GP-2 (16') with filter		15:40	0.0	16.9	1.6	0.0	0.0				
GP-2 (12') without filter	1/31/2013	13:50	0.0	17.5	5.0	0.0	0.0	10s - 20s	none		
GP-2 (12') with filter		13:50	0.0	17.1	4.2	0.0	0.0				
GP-2 (16') without filter		13:55	0.0	16.8	5.0	0.0	0.0				
GP-2 (16') with filter		13:55	0.0	17.2	3.4	0.0	0.0				
GP-2 (12') without filter	2/7/2013	15:14	0.0	15.4	5.4	0.0	0.0	20s - 50s	none		
GP-2 (12') with filter		15:14	0.0	16.0	3.5	0.0	0.0				
GP-2 (16') without filter		15:17	0.0	15.0	6.4	0.0	0.0				
GP-2 (16') with filter		15:17	0.0	15.3	4.5	0.0	0.0				
GP-2 (12') without filter	2/12/2013	12:30	0.1	9.2	8.8	0.0	0.0	30s - 40s	none		
GP-2 (12') with filter		12:30	0.1	9.7	8.4	0.0	0.0				
GP-2 (16') without filter		12:45	0.0	7.5	9.1	0.0	0.0				
GP-2 (16') with filter		12:45	0.0	6.9	8.2	0.0	0.0				

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12") without filter	2/21/2013	13:45	0.0	8.8	8.5	0.0	0.0	20s	Trace		
GP-2 (12") with filter		13:45	0.0	9.1	8.0	0.0	0.0				
GP-2 (16") without filter		13:50	0.0	6.9	7.0	0.0	0.0				
GP-2 (16") with filter		13:50	0.0	7.0	6.7	0.0	0.0				
GP-2 (12") without filter	2/28/2013	12:45	0.0	15.8	4.9	0.0	0.0	30s - 40s	~1 inch		
GP-2 (12") with filter		12:45	0.0	15.8	5.1	0.0	0.0				
GP-2 (16") without filter		12:49	0.0	13.6	6.2	0.0	0.0				
GP-2 (16") with filter		12:49	0.0	13.5	6.2	0.0	0.0				
GP-2	3/7/2013	Inaccessible due to snow cover from road plow activity						30s	None		
GP-2 (12") without filter	3/14/2013	13:45	0.0	16.2	4.3	0.0	0.0	20s - 40s	None		
GP-2 (12") with filter		13:45	0.0	16.1	4.4	0.0	0.0				
GP-2 (16") without filter		13:53	0.0	13.9	6.1	0.0	0.0				
GP-2 (16") with filter		13:53	0.0	13.9	6.2	0.0	0.0				
GP-2 (12") without filter	3/21/2013	12:20	0.0	15.9	3.8	0.0	0.0	20s - 30s	Trace		
GP-2 (12") with filter		12:20	0.0	15.9	3.9	0.0	0.0				
GP-2 (16") without filter		12:26	0.0	14.2	5.7	0.0	0.0				
GP-2 (16") with filter		12:26	0.0	14.1	5.9	0.0	0.0				
GP-2 (12") without filter	3/28/2013	12:10	0.0	14.6	6.1	0.0	0.0	30s - 40s	None		
GP-2 (12") with filter		12:10	0.0	14.4	6.3	0.0	0.0				
GP-2 (16") without filter		12:15	0.0	12.9	7.4	0.0	0.0				
GP-2 (16") with filter		12:15	0.0	12.9	7.5	0.0	0.0				
GP-2 (12") without filter	4/4/2013	14:04	0.0	15.7	5.2	0.0	0.0	30s - 50s	None		
GP-2 (12") with filter		14:04	0.0	15.6	5.1	0.0	0.0				
GP-2 (16") without filter		14:11	0.0	13.8	6.0	0.0	0.0				
GP-2 (16") with filter		14:11	0.0	13.8	6.1	0.0	0.0				
GP-2 (12") without filter	4/9/2013	13:56	0.0	13.9	5.2	0.0	0.0	50s - 80s	None		
GP-2 (12") with filter		13:56	0.0	13.8	5.5	0.0	0.0				
GP-2 (16") without filter		14:03	0.0	12.2	5.9	0.0	0.0				
GP-2 (16") with filter		14:03	0.0	12.2	6.0	0.0	0.0				
GP-2 (12") without filter	4/18/2013	13:48	0.0	14.7	6.1	0.0	0.0	60s - 80s	None		
GP-2 (12") with filter		13:48	0.0	14.7	6.0	0.0	0.0				
GP-2 (16") without filter		13:54	0.0	13.2	7.4	0.0	0.0				
GP-2 (16") with filter		13:54	0.0	13.3	7.2	0.0	0.0				
GP-2 (12") without filter	4/23/2013	14:45	0.0	16.3	3.8	0.0	0.0	50s - 60s	None		
GP-2 (12") with filter		14:45	0.0	16.8	0.8	0.0	0.0				
GP-2 (16") without filter		14:48	0.0	15.9	4.2	0.0	0.0				
GP-2 (16") with filter		14:48	0.0	16.3	2.9	0.0	0.0				
GP-2 (12") without filter	4/30/2013	14:45	0.0	16.8	3.4	0.0	0.0	40s - 70s	None		
GP-2 (12") with filter		14:45	0.0	17.0	0.9	0.0	0.0				
GP-2 (16") without filter		14:50	0.0	16.3	3.9	0.0	0.0				
GP-2 (16") with filter		14:50	0.0	16.7	1.6	0.0	0.0				
GP-2 (12") without filter	5/9/2013	14:41	0.0	14.8	3.3	0.0	0.0	50s - 70s	None		
GP-2 (12") with filter		14:41	0.0	14.9	0.9	0.0	0.0				
GP-2 (16") without filter		14:45	0.0	14.1	3.8	0.0	0.0				
GP-2 (16") with filter		14:45	0.0	14.5	1.5	0.0	0.0				

Table 1

**GP-2 Field Monitoring Values**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	5/16/2013	13:25	0.0	15.3	4.1	0.0	0.0	40s - 80s	~1 inch		
GP-2 (12') with filter		13:25	0.0	15.3	4.0	0.0	0.0				
GP-2 (16') without filter		13:32	0.0	13.9	4.8	0.0	0.0				
GP-2 (16') with filter		13:32	0.0	13.9	4.8	0.0	0.0				
GP-2 (12') without filter	5/21/2013	15:29	0.0	13.7	3.8	0.0	0.0	40s - 80s	~0.2 inch		
GP-2 (12') with filter		15:29	0.0	13.8	3.2	0.0	0.0				
GP-2 (16') without filter		15:32	0.0	12.7	4.5	0.0	0.0				
GP-2 (16') with filter		15:32	0.0	12.8	3.0	0.0	0.0				
GP-2 (12') without filter	5/30/2013	13:20	0.0	15.8	3.8	0.0	0.0	50s - 80s	~1.3 inch		
GP-2 (12') with filter		13:20	0.0	15.8	3.9	0.0	0.0				
GP-2 (16') without filter		13:25	0.0	13.1	5.1	0.0	0.0				
GP-2 (16') with filter		13:25	0.0	13.0	5.3	0.0	0.0				
GP-2 (12') without filter	6/6/2013	14:50	0.0	16.3	4.6	0.0	0.0	60s	0.25 inch		
GP-2 (12') with filter		14:50	0.0	16.2	4.9	0.0	0.0				
GP-2 (16') without filter		15:00	0.0	14.7	6.0	0.0	0.0				
GP-2 (16') with filter		15:00	0.0	14.7	6.2	0.0	0.0				
GP-2 (12') without filter	6/13/2013	16:05	0.0	8.2	5.4	0.0	0.0	60s - 80s	1.55 inch		
GP-2 (12') with filter		16:05	0.0	7.5	5.4	0.0	0.0				
GP-2 (16') without filter		16:10	--	5.2	6.6	0.0	0.0				
GP-2 (16') with filter		16:10	--	5.1	6.4	0.0	0.0				
GP-2 (12') without filter	6/20/2013	--	0.0	8.0	6.1	0.0	0.0	50s - 80s	None		
GP-2 (12') with filter		--	0.0	8.3	5.9	0.0	0.0				
GP-2 (16') without filter		--	--	5.3	6.5	0.0	0.0				
GP-2 (16') with filter		--	--	5.6	6.0	0.0	0.0				
GP-2 (12') without filter	6/27/2013	14:06	0.6	15.9	1.5	0.0	0.0	70s - 80s	Trace		
GP-2 (12') with filter		14:06	0.6	16.3	0.2	0.0	0.0				
GP-2 (16') without filter		14:11	43.6	3.7	2.6	1.6	30				
GP-2 (16') with filter		14:11	43.6	2.1	3.6	1.0	20				
GP-2 (12') without filter	7/3/2013	13:18	23.5	6.9	4.9	1.4	28	60s - 80s	Trace		
GP-2 (12') with filter		13:18	23.5	7.5	3.4	0.7	13				
GP-2 (16') without filter		13:22	59.6	1.9	7.1	5.8	>100				
GP-2 (16') with filter		13:22	59.6	1.6	6.9	1.8	36				
GP-2 (12') without filter	7/11/2013	14:45	40.4	4.0	6.5	6.5	>100	60s - 70s	None		
GP-2 (12') with filter		14:45	40.4	4.0	4.9	3.4	68				
GP-2 (16') without filter		14:51	55.6	4.6	6.2	11.2	>100				
GP-2 (16') with filter		14:51	55.6	3.9	5.0	2.2	44				
GP-2 (12') without filter	7/18/2013	14:35	20.4	17.7	1.2	0.5	10	70s - 90s	None		
GP-2 (12') with filter		14:35	20.4	17.7	1.0	0.2	5				
GP-2 (16') without filter		14:41	44.3	1.9	7.4	5.1	>100				
GP-2 (16') with filter		14:41	44.3	4.7	1.8	1.8	36				
GP-2 (12') without filter	7/25/2013	14:15	38.7	4.8	6.5	3.8	75	50s - 70s	None		
GP-2 (12') with filter		14:15	38.7	4.7	6.1	3.0	60				
GP-2 (16') without filter		14:20	48.3	4.4	7.9	4.0	80				
GP-2 (16') with filter		14:20	48.3	4.2	8.3	3.3	65				
GP-2 (12') without filter	8/1/2013	14:00	83.5	8.1	5.3	1.4	28	60s - 80s	None		
GP-2 (12') with filter		14:00	83.5	6.2	4.9	1.1	21				
GP-2 (16') without filter		14:05	89.8	4.1	7.3	2.8	55				
GP-2 (16') with filter		14:05	89.8	3.1	7.2	1.8	35				

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	8/6/2013	14:06	10.5	3.9	7.6	1.3	27	60s - 80s	None		
GP-2 (12') with filter		14:06	10.5	3.7	5.9	1.0	21				
GP-2 (16') without filter		14:10	31.6	4.3	7.4	2.5	51				
GP-2 (16') with filter		14:10	31.6	3.1	6.1	1.7	34				
GP-2 (12') without filter	8/15/2013	13:35	16.6	7.9	3.1	2.0	40	40s - 70s	None		
GP-2 (12') with filter		13:35	16.6	7.7	3.3	1.6	32				
GP-2 (16') without filter		13:40	20.6	1.5	6.2	2.2	44				
GP-2 (16') with filter		13:40	20.6	1.4	7.5	2.0	40				
GP-2 (12') without filter	8/22/2013	14:41	33.9	3.2	8.0	2.3	47	60s - 80s	Trace (0.06 in.)		
GP-2 (12') with filter		14:41	33.9	3.2	8.4	2.0	41				
GP-2 (16') without filter		14:45	55.0	1.8	8.5	4.3	87				
GP-2 (16') with filter		14:45	55.0	1.6	8.3	2.0	41				
GP-2 (12') without filter	8/27/2013	14:21	22.8	2.5	8.4	3.7	74	70s - 80s	None		
GP-2 (12') with filter		14:21	22.8	2.6	8.9	1.9	39				
GP-2 (16') without filter		14:26	39.5	2.3	8.7	7.9	>100				
GP-2 (16') with filter		14:26	39.5	2.2	9.0	6.1	>100				
GP-2 (12') without filter	9/5/2013	-	31.3	2.2	8.7	7.0	>100	50s - 80s	None		
GP-2 (12') with filter		-	31.3	2.3	6.9	3.0	58				
GP-2 (16') without filter		-	39.0	3.1	8.3	8.4	>100				
GP-2 (16') with filter		-	39.0	3.7	6.5	2.8	56				
GP-2	9/12/2013	Inaccessible due to high water/flood conditions						60s - 80s	0.29 inches		
GP-2 (12') without filter	9/20/2013		24.7	2.6	8.7	3.2	65	60s - 80s	0.6 inches	1009 - 1013	
GP-2 (12') with filter			24.7	2.1	8.1	1.8	34				
GP-2 (16') without filter			40.4	1.4	9.6	7.0	>100				
GP-2 (16') with filter			40.4	1.5	8.9	2.1	42				
GP-2 (12') without filter	9/24/2013	14:27	55.7	1.8	9.6	3.6	71	40s - 70s	None	1016 - 1018	
GP-2 (12') with filter		14:27	55.7	1.9	9.2	3.3	67				
GP-2 (16') without filter		14:33	68.4	1.5	10.0	4.3	86				
GP-2 (16') with filter		14:33	68.4	1.6	10.6	3.9	78				
GP-2 (12') without filter	10/3/2013	13:27	0.9	6.8	7.2	1.3	25	60s - 70s	0.27 inches	1015 - 1022	
GP-2 (12') with filter		13:27	0.9	6.9	5.8	1.1	17				
GP-2 (16') without filter		13:35	53.6	3.6	8.9	2.2	44				
GP-2 (16') with filter		13:35	53.6	3.3	7.5	1.4	27				
GP-2 (12') without filter	10/10/2013	13:41	18.6	0.7	10.3	1.9	38	40s - 70s	None	1020 - 1022	
GP-2 (12') with filter		13:41	18.6	0.5	10.2	1.3	27				
GP-2 (16') without filter		13:47	22.6	0.9	10.3	1.9	39				
GP-2 (16') with filter		13:47	22.6	1.7	9.0	1.2	25				
GP-2 (12') without filter	10/17/2013	14:46	22.8	1.2	10.5	1.4	28	40s - 50s	0.1 inches	1011 - 1014	MW-7: 18.56
GP-2 (12') with filter		14:46	22.8	7.5	6.8	0.8	16				MW-8: 18.70
GP-2 (16') without filter		14:50	23.1	1.3	10.6	1.5	29				MW-11: 20.31
GP-2 (16') with filter		14:50	23.1	1.5	10.1	1.2	23				MW-12: 20.39
GP-2 (12') without filter	10/24/2013	13:42	0.0	1.5	10.9	0.0	0	30s - 40s	Trace (0.02 inches)	1015 - 1025	MW-7: 18.69
GP-2 (12') with filter		13:42	0.0	1.6	10.2	0.0	0				MW-8: 18.83
GP-2 (16') without filter		13:47	5.6	4.6	9.6	0.0	0				MW-11: 20.66
GP-2 (16') with filter		13:47	5.6	4.9	8.6	0.0	0				MW-12: 20.44
GP-2 (12') without filter	10/31/2013	15:07	0.0	6.3	8.2	0.0	0	60s	1.25 inches	1000 - 1010	MW-7: 18.71
GP-2 (12') with filter		15:07	0.0	6.4	7.3	0.0	0				MW-8: 18.87
GP-2 (16') without filter		15:13	1.1	6.4	8.3	0.0	0				MW-11: 20.69
GP-2 (16') with filter		15:13	1.1	6.7	7.5	0.0	0				MW-12: 20.47

Table 1

**GP-2 Field Monitoring Values**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12") without filter	11/7/2013	13:45	0.0	4.6	9.5	0.0	0	40s	Trace (0.04 inches)	1020 - 1025	MW-7: 18.43
GP-2 (12") with filter		13:45	0.0	4.1	7.9	0.0	0				MW-8: 18.57
GP-2 (16") without filter		13:51	0.0	2.6	10.7	0.0	0				MW-11: 20.28
GP-2 (16") with filter		13:51	0.0	2.6	10.2	0.0	0				MW-12: 20.13
GP-2 (12") without filter	11/12/2013	13:32	0.0	5.8	9.5	0.0	0	20s - 30s	Trace (0.05 inches)	1030 - 1036	MW-7: 18.28
GP-2 (12") with filter		13:32	0.0	6.2	8.6	0.0	0				MW-8: 18.37
GP-2 (16") without filter		13:38	0.0	5.4	9.6	0.0	0				MW-11: 20.02
GP-2 (16") with filter		13:38	0.0	5.3	8.6	0.0	0				MW-12: 19.86
GP-2 (12") without filter	11/20/2013	14:10	0.0	4.5	10.1	0.0	0	20s - 40s	None	1023 - 1026	MW-7: 18.27
GP-2 (12") with filter		14:10	0.0	5.0	8.3	0.0	0				MW-8: 18.40
GP-2 (16") without filter		14:15	0.0	3.5	10.4	0.0	0				MW-11: 20.24
GP-2 (16") with filter		14:15	0.0	4.0	9.8	0.0	0				MW-12: 20.02
GP-2 (12") without filter	11/26/2013	14:35	0.0	3.4	10.4	0.1	1	30s	Trace (0.01 inches)	1013 - 1019	MW-7: 18.10
GP-2 (12") with filter		14:35	0.0	3.4	9.5	0.0	0				MW-8: 18.25
GP-2 (16") without filter		14:39	0.0	3.3	10.7	0.1	1				MW-11: 20.07
GP-2 (16") with filter		14:39	0.0	3.3	10.6	0.1	1				MW-12: 19.85
GP-2 (12") without filter	12/5/2013	14:44	0.0	6.5	9.7	0.0	0	30s - 40s	0.07 inches	1013 - 1016	MW-7: 18.38
GP-2 (12") with filter		14:44	0.0	6.6	8.7	0.0	0				MW-8: 18.52
GP-2 (16") without filter		14:49	0.0	7.3	9.1	0.0	0				MW-11: 20.35
GP-2 (16") with filter		14:49	0.0	7.4	8.3	0.0	0				MW-12: 20.13
GP-2 (12") without filter	12/12/2013	15:45	0.0	9.9	8.5	0.0	0	15 - 20	None	1030 - 1036	MW-7: 18.45
GP-2 (12") with filter		15:45	0.0	9.7	8.3	0.0	0				MW-8: 18.60
GP-2 (16") without filter		15:49	0.0	7.3	10.4	0.0	0				MW-11: 20.42
GP-2 (16") with filter		15:49	0.0	6.9	9.8	0.0	0				MW-12: 20.20
GP-2 (12") without filter	12/19/2013	14:48	0.0	10.8	7.8	0.0	0	30s - 40s	None	1016 - 1018	MW-7: 18.39
GP-2 (12") with filter		14:48	0.0	11.0	6.8	0.0	0				MW-8: 18.54
GP-2 (16") without filter		14:51	0.0	9.0	8.9	0.0	0				MW-11: 20.37
GP-2 (16") with filter		14:51	0.0	9.6	7.9	0.0	0				MW-12: 20.21
GP-2 (12") without filter	12/23/2013	11:20	0.0	8.1	7.9	0.0	0	20s - 30s	Trace (0.02 inches)	1026 - 1029	MW-7: 15.63
GP-2 (12") with filter		11:20	0.0	8.1	6.9	0.0	0				MW-8: 15.72
GP-2 (16") without filter		11:27	0.0	5.8	10.4	0.0	0				MW-11: 17.45
GP-2 (16") with filter		11:27	0.0	7.6	8.7	0.0	0				MW-12: 17.32
GP-2 (12") without filter	1/2/2014	16:20	0.0	21.5	0.1	0.0	0	20s - 30s	5.46 inches	1012 - 1026	MW-7: 15.24
GP-2 (12") with filter		16:20	0.0	18.2	0.3	0.0	0				MW-8: 15.39
GP-2 (16") without filter		16:24	0.0	21.4	0.3	0.0	0				MW-11: 17.21
GP-2 (16") with filter		16:24	0.0	21.5	0.3	0.0	0				MW-12: 16.98
GP-2 (12") without filter	1/9/2014	14:40	0.0	13.8	6.6	0.0	0	20s - 30s	1.55 inches	1026 - 1035	MW-7: 15.17
GP-2 (12") with filter		14:40	0.0	14.0	6.0	0.0	0				MW-8: 15.28
GP-2 (16") without filter		14:45	0.0	12.0	8.2	0.0	0				MW-11: 17.11
GP-2 (16") with filter		14:45	0.0	13.1	6.7	0.0	0				MW-12: 16.98
GP-2 (12") without filter	1/16/2014	13:00	0.0	13.8	6.1	0.0	0	20s - 30s	0.97 inches	1008 - 1019	MW-7: 15.93
GP-2 (12") with filter		13:00	0.0	13.9	3.8	0.0	0				MW-8: 16.06
GP-2 (16") without filter		13:07	0.0	12.9	7.2	0.0	0				MW-11: 17.90
GP-2 (16") with filter		13:07	0.0	13.2	4.1	0.0	0				MW-12: 17.71
GP-2 (12") without filter	1/23/2014	13:00	0.0	16.8	5.1	0.0	0	5 - 15	Trace	1019 - 1038	MW-7: 15.62
GP-2 (12") with filter		13:00	0.0	16.5	4.7	0.0	0				MW-8: 15.83
GP-2 (16") without filter		13:07	0.0	15.4	6.0	0.0	0				MW-11: 17.59
GP-2 (16") with filter		13:07	0.0	15.3	4.9	0.0	0				MW-12: 17.46

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12") without filter	1/28/2014	14:25	0.0	17.3	4.6	0.0	0	5	None	1030 - 1033	MW-7: 17.27
GP-2 (12") with filter		14:25	0.0	17.3	4.1	0.0	0				MW-8: 17.41
GP-2 (16") without filter		14:30	0.0	15.2	6.5	0.0	0				MW-11 & MW-12: iced over
GP-2 (16") with filter		14:30	0.0	15.2	5.8	0.0	0				
GP-2 (12")	2/6/2014	Inaccessible due to snow coverage from road plows						15 - 25	0.3 inches	1029 - 1032	Inaccessible
GP-2 (12") without filter	2/13/2014	15:16	0.0	17.5	4.5	0.0	0	25 - 35	None	1003 - 1018	MW-7: 17.62
GP-2 (12") with filter		15:16	0.0	17.7	3.8	0.0	0				MW-8: 17.77
GP-2 (16") without filter		15:20	0.0	19.3	2.2	0.0	0				MW-11 & MW-12: iced over
GP-2 (16") with filter		15:20	0.0	19.5	0.6	0.0	0				
GP-2 (12") without filter	2/20/2014	14:12	0.0	16.8	4.3	0.0	0	35 - 40	None	1010 - 1014	MW-7: 17.53
GP-2 (12") with filter		14:12	0.0	16.8	4.0	0.0	0				MW-8: 17.66
GP-2 (16") without filter		14:14	0.0	15.8	5.4	0.0	0				MW-11: 19.50
GP-2 (16") with filter		14:14	0.0	15.9	4.5	0.0	0				MW-12: 19.27
GP-2 (12") without filter	2/27/2014	13:10	0.1	19.3	2.3	0.0	0	15 - 25	Trace	1008 - 1024	MW-7: 15.64
GP-2 (12") with filter		13:10	0.1	19.4	1.7	0.0	0				MW-8: 15.78
GP-2 (16") without filter		13:17	0.0	17.2	4.8	0.1	0				MW-11: 17.59
GP-2 (16") with filter		13:17	0.0	17.4	4.1	0.0	0				MW-12: 17.41
GP-2 (12") without filter	3/6/2014	14:21	0.0	17.8	4.3	0.0	0	35 - 45	None	1020 - 1029	MW-7: na
GP-2 (12") with filter		14:21	0.0	17.7	4.1	0.0	0				MW-8: na
GP-2 (16") without filter		0.0	16.8	5.2	0.0	0	0				MW-11: na
GP-2 (16") with filter		0.0	16.7	5.1	0.0	0	0				MW-12: na
GP-2 (12") without filter	4/2/2014	11:57	0.0	18.1	3.5	0.0	0	50s	Trace (0.15 inches)	1020	MW-7: 14.12
GP-2 (12") with filter		11:57	0.0	18.0	3.7	0.0	0				MW-8: 14.32
GP-2 (16") without filter		0.0	17.3	4.4	0.0	0	0				MW-11: 16.06
GP-2 (16") with filter		0.0	17.3	4.5	0.0	0	0				MW-12: 15.91
GP-2 (12") without filter	5/8/2014 <sup>[3]</sup>	15:18	0.2	16.3	3.0	0.0	0	75-85	None	1013-1017	MW-7: 16.84
GP-2 (12") with filter		15:18	0.2	16.4	2.5	0.0	0				MW-8: 16.70
GP-2 (16") without filter		15:22	0.5	20.3	0.0	0.0	0				MW-11: 18.68
GP-2 (16") with filter		15:22	0.5	20.0	1.6	0.0	0				MW-12: 18.46
GP-2 (12") without filter	6/3/2014	15:40	0.0	12.6	4.1	0.0	0	75-85	Trace	1011-1014	MW-7: na
GP-2 (12") with filter		15:40	0.0	12.6	3.7	0.0	0				MW-8: na
GP-2 (16") without filter		15:45	0.1	11.6	4.4	0.0	0				MW-11: na
GP-2 (16") with filter		15:45	0.1	11.7	4.4	0.0	0				MW-12: na
GP-2 (12") without filter	7/17/2014	15:17	0.0	2.2	6.7	0.0	0	70-75	None	1016-1020	MW-7: 17.37
GP-2 (12") with filter		15:17	0.0	2.1	6.4	0.0	0				MW-8: 17.51
GP-2 (16") without filter		15:23	15.0	1.7	6.7	1.7	35				MW-11: 19.36
GP-2 (16") with filter		15:23	15.0	1.7	6.2	1.1	23				MW-12: 19.13
GP-2 (12") without filter	8/14/2014	14:40	13.3	2.2	7.4	1.6	33	70-80	None	1014-1017	MW-7: 18.33
GP-2 (12") with filter		14:40	13.3	2.3	6.4	1.4	29				MW-8: 18.19
GP-2 (16") without filter		14:46	45.8	1.3	8.2	5.8	>100				MW-11: 20.17
GP-2 (16") with filter		14:46	45.8	1.3	7.6	2.4	49				MW-12: 19.94
GP-2 (12") without filter	8/21/2014	15:51	25.6	0.9	8.5	2.7	55	75-79	1.14 Inches	1014-1018	MW-7: na
GP-2 (12") with filter		15:51	25.6	0.9	8.2	1.8	36				MW-8: na
GP-2 (16") without filter		14:45	7.2	0.8	9.2	6.0	>100				MW-11: na
GP-2 (16") with filter		14:45	7.2	0.8	8.2	2.4	48				MW-12: na
GP-2 (12") without filter	8/28/2014	11:40	35.4	0.7	9.2	4.5	90	75--80	None	1016-1019	MW-7: 18.11
GP-2 (12") with filter		11:40	35.4	0.7	7.4	2.4	48				MW-8: 18.25
GP-2 (16") without filter		11:43	40.0	1.7	9.5	5.9	>100				MW-11: 20.10
GP-2 (16") with filter		11:43	40.0	1.6	8.3	2.2	45				MW-12: 19.87



Table 1

**GP-2 Field Monitoring Values**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12") without filter	9/4/2014	14:40	26.5	3.8	7.6	2.3	46	85-90	None	1016-1019	MW-7: na
GP-2 (12") with filter		14:40	26.5	3.9	7.9	2.1	41				MW-8: na
GP-2 (16") without filter		14:45	38.2	6.1	7.1	3.3	66				MW-11: na
GP-2 (16") with filter		14:45	38.2	6.1	7.3	3.0	60				MW-12: na
GP-2 (12") without filter	10/9/2014	13:34	0.0	4.8	9.0	0.0	0	50s	0.3 Inches	1017-1021	MW-7: na
GP-2 (12") with filter		13:34	0.0	5.2	9.3	0.0	0				MW-8: na
GP-2 (16") without filter		13:40	0.0	3.5	10.4	0.0	0				MW-11: na
GP-2 (16") with filter		13:40	0.0	3.6	10.2	0.0	0				MW-12: na
GP-2 (12") without filter	11/26/2014	13:43	0.0	14.6	4.1	0.0	0	30-35	None	1018-1023	MW-7: na
GP-2 (12") with filter		13:43	0.0	15.0	1.6	0.0	0				MW-8: na
GP-2 (16") without filter		13:46	0.0	13.6	4.6	0.0	0				MW-11: na
GP-2 (16") with filter		13:46	0.0	13.4	2.3	0.0	0				MW-12: na
GP-2 (12") without filter	2/6/2015	16:00	0.0	20.6	0.0	0.0	0	25-35	None	1022 - 1030	MW-7: 17.85
GP-2 (12") with filter		16:00	0.0	20.7	0.0	0.0	0				MW-8: 17.98
GP-2 (16") without filter		16:04	0.0	14.7	5.9	0.0	0				MW-11: 19.81
GP-2 (16") with filter		16:04	0.0	14.8	5.2	0.0	0				MW-12: 19.59
GP-2 (12") without filter	5/20/2015	16:09	0.0	9.5	4.2	0.0	0	50-60	None	1016 - 1022	MW-7: 17.45
GP-2 (12") with filter		16:09	0.0	9.8	3.4	0.0	0				MW-8: 17.60
GP-2 (16") without filter		16:11	0.0	7.1	5.2	0.0	0				MW-11: 19.43
GP-2 (16") with filter		16:11	0.0	7.0	4.9	0.0	0				MW-12: 19.21
GP-2 (12") without filter	8/20/2015	14:00	0.0	4.4	9.0	0.0	0	65-70	Trace	1009 - 1017	MW-7: 17.75
GP-2 (12") with filter		14:00	0.0	4.4	8.4	0.0	0				MW-8: 17.56
GP-2 (16") without filter		14:04	1.2	2.3	9.8	0.1	3				MW-11: 19.54
GP-2 (16") with filter		14:04	1.2	2.5	9.6	0.1	2				MW-12: 19.30
GP-2 (12") without filter	11/5/2015	14:22	0.0	2.2	9.7	0.0	0	60-70	Trace	1019 - 1021	MW-7: 18.60
GP-2 (12") with filter		14:22	0.0	2.3	7.5	0.0	0				MW-8: 18.46
GP-2 (16") without filter		14:25	0.0	1.2	10.5	0.0	0				MW-11: 20.43
GP-2 (16") with filter		14:25	0.0	1.2	8.7	0.0	0				MW-12: 20.20
GP-2 (12") without filter	1/28/2016	14:42	0.0	14.2	6.2	0.0	0	35-45	Trace	1005 - 1012	MW-7: 17.54
GP-2 (12") with filter		14:42	0.0	14.5	4.9	0.0	0				MW-8: 17.40
GP-2 (16") without filter		14:47	0.0	12.0	7.9	0.0	0				MW-11: 19.37
GP-2 (16") with filter		14:47	0.0	12.1	7.4	0.0	0				MW-12: 19.15
GP-2 (12") without filter	7/21/2016	14:26	74.9	1.5	7.5	13.5	>100	88-91	None	1019 - 1020	MW-7: 18.77
GP-2 (12") with filter		14:26	74.9	1.3	7.4	4.5	87				MW-8: 18.65
GP-2 (16") without filter		14:32	98.1	1.3	7.8	34.6	>100				MW-11: 20.61
GP-2 (16") with filter		14:32	98.1	1.4	7.5	5.0	>100				MW-12: 20.37
GP-2 (12") without filter	7/29/2016 <sup>[4]</sup>	11:06	68.4	0.5	7.5	13.7	>100	85-86	None	1010 - 1014	MW-7: 19.08
GP-2 (12") with filter		11:06	68.4	10.1	3.4	2.1	42				MW-8: 18.86
GP-2 (16") without filter		11:17	83.5	0.7	7.7	39.2	>100				MW-11: 20.58
GP-2 (16") with filter		11:17	83.5	9.8	3.7	2.6	52				MW-12: 20.68
GP-2 (12") without filter	8/5/2016	17:08	30.4	0.1	7.7	12.3	>100	87 - 91	None	1012 - 1014	MW-7: 19.20
GP-2 (12") with filter		17:08	30.4	0.1	7.6	4.5	91				MW-8: 19.05
GP-2 (16") without filter		17:12	63.0	0.2	7.9	37.8	>100				MW-11: 21.03
GP-2 (16") with filter		17:12	63.0	0.9	7.4	5.1	>100				MW-12: 20.78

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	8/13/2016	11:25	41.8	0.0	8.2	15.5	>100	79 - 84	Trace	1011 - 1015	MW-7: 19.24
GP-2 (12') with filter		11:25	41.8	0.9	7.6	4.5	90				MW-8: 19.38
GP-2 (16') without filter		11:32	73.0	0.0	8.6	44.1	>100				MW-11: 20.97
GP-2 (16') with filter		11:32	73.0	1.6	7.7	4.9	99				MW-12: 21.08
GP-2 (12') without filter	8/19/2016 <sup>[5]</sup>	11:04	8.1	0.0	8.9	16.7	>100	77 - 86	None	1014 - 1017	MW-7: 19.04
GP-2 (12') with filter		11:04	8.1	0.1	8.6	4.1	82				MW-8: 18.90
GP-2 (16') without filter		11:12	17.0	0.3	9.2	30.5	>100				MW-11: 20.87
GP-2 (16') with filter		11:12	17.0	0.4	9.0	4.2	84				MW-12: 20.64
GP-2 (12') without filter	8/23/2016	12:53	47.9	0.1	8.3	9.3	>100	75 - 80	None	1023 - 1026	MW-7: 18.99
GP-2 (12') with filter		12:53	47.9	0.1	8.3	3.4	68				MW-8: 19.12
GP-2 (16') without filter		12:59	68.3	0.0	8.7	15.5	>100				MW-11: 20.70
GP-2 (16') with filter		12:59	68.3	0.0	8.7	3.5	70				MW-12: 20.81
GP-2 (12') without filter	8/29/2016	13:08	60.7	0.4	8.8	6.4	>100	79-88	None	1022 - 1025	MW-7: 19.11
GP-2 (12') with filter		13:08	60.7	0.4	8.6	3.0	60				MW-8: 18.98
GP-2 (16') without filter		13:13	82.5	0.2	9.3	15.7	>100				MW-11: 20.71
GP-2 (16') with filter		13:13	82.5	0.3	9.0	3.3	65				MW-12: 20.85
GP-2 (12') without filter	9/7/2016		18.1	0.0	8.5	4.5	90	75 - 90	None	1019 - 1022	MW-7: 19.45
GP-2 (12') with filter			18.1	0.0	8.0	2.8	56				MW-8: 19.29
GP-2 (16') without filter			33.0	0.0	8.7	13.3	>100				MW-11: 21.74
GP-2 (16') with filter			33.0	0.0	8.5	3.6	73				MW-12: 21.03
GP-2 (12') without filter	9/14/2016		32.7	0.0	9.3	6.9	>100	75 - 85	Trace	1020 - 1024	MW-7: 19.37
GP-2 (12') with filter			32.7	0.0	9.4	3.2	65				MW-8: 19.22
GP-2 (16') without filter			53.1	0.0	9.6	20.1	>100				MW-11: 21.10
GP-2 (16') with filter			53.1	0.0	9.6	4.0	80				MW-12: 20.91
GP-2 (12') without filter	9/20/2016	14:10	25.5	0.0	8.8	7.4	>100	72 - 86	None	1019 - 1022	MW-7: 19.55
GP-2 (12') with filter		14:10	25.5	0.0	8.8	3.3	67				MW-8: 19.41
GP-2 (16') without filter		14:28	37.7	0.0	9.0	19.4	>100				MW-11: 21.24
GP-2 (16') with filter		14:28	37.7	0.0	8.8	4.0	80				MW-12: 21.15
GP-2 (12') without filter	9/28/2016	14:43	28.5	0.1	10.0	6.6	>100	50 - 60	1 inch	1009 - 1014	MW-7: 19.67
GP-2 (12') with filter		14:43	28.5	0.0	10.1	3.1	62				MW-8: 19.52
GP-2 (16') without filter		14:48	35.2	0.1	10.2	16.6	>100				MW-11: 21.51
GP-2 (16') with filter		14:48	35.2	0.1	10.2	3.7	74				MW-12: 21.26
GP-2 (12') without filter	10/7/2016	11:38	88.4	0.0	9.4	5.7	>100	55 - 79	None	1016 - 1020	MW-7: 19.56
GP-2 (12') with filter		11:38	88.4	0.0	9.3	2.8	56				MW-8: 19.40
GP-2 (16') without filter		11:43	89.5	0.0	9.7	11.9	>100				MW-11: 21.38
GP-2 (16') with filter		11:43	89.5	0.0	8.6	3.4	68				MW-12: 21.13
GP-2 (12') without filter	10/12/2016	15:44	27.9	0.0	9.4	4.7	94	50 - 77	Trace	1017 - 1023	MW-7: 19.69
GP-2 (12') with filter		15:44	27.9	0.0	9.2	2.7	54				MW-8: 19.55
GP-2 (16') without filter		15:40	44.2	0.0	9.7	10.2	>100				MW-11: 21.27
GP-2 (16') with filter		15:40	44.2	0.0	9.4	2.9	59				MW-12: 21.52
GP-2 (12') without filter	10/21/2016	12:55	25.4	0.0	10.4	6.0	>100	48 - 55	0.3 inches	1012 - 1018	MW-7: 19.71
GP-2 (12') with filter		12:55	25.4	0.2	10.1	2.8	56				MW-8: 19.54
GP-2 (16') without filter		12:55	27.2	0.4	10.5	12.5	>100				MW-11: 21.26
GP-2 (16') with filter		12:55	27.2	0.4	10.1	3.1	62				MW-12: na
GP-2 (12') without filter	10/28/2016	13:17	16.5	0.8	10.1	3.2	65	43 - 64	None	1020 - 1027	MW-7: 19.53
GP-2 (12') with filter		13:17	16.5	0.4	8.4	2.0	40				MW-8: 19.38
GP-2 (16') without filter			32.9	0.5	10.0	4.4	90				MW-11: 21.10
GP-2 (16') with filter			32.9	0.7	9.6	1.9	40				MW-12: 21.35

Table 1

**GP-2 Field Monitoring Values  
South Dayton Dump and Landfill Site  
Moraine, Ohio**

Sample Location:	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> <sup>[2]</sup> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	Water Levels (ft BTOR)
GP-2 (12') without filter	11/29/2016	13:30	0.2	0.2	11.3	0.0	0	45 - 60	None	996 - 1007	MW-7: na
GP-2 (12') with filter		13:30	0.2	0.2	11.0	0.0	0				MW-8: na
GP-2 (16') without filter		13:35	9.6	0.4	10.8	0.7	14				MW-11: na
GP-2 (16') with filter		13:35	9.6	0.4	10.5	0.4	9				MW-12: na

## Notes:

- [1] - The explosive gas monitor baseline reading was 1 percent LEL. The meter did not zero for LEL readings and the corresponding methane readings were 0 percent; therefore, the readings of 1 percent are anomalous.
- [2] - The Landtec GEM 2000 combustible gas monitor measures explosive gases as a percent of methane by volume. The presence of other hydrocarbon gases affects methane readings.
- [3] -CO<sub>2</sub> readings started at 0.1 ppm.
- [4] -GHD field personnel noted the presence of a manhole (and a possible underground utility) located ~ 3 feet from GP-2 that may be contributing to elevated methane levels
- [5] Collected SUMMA canister samples at GP-2 (12')(16')
- PID - Photoionization Detector
- O<sub>2</sub> - Oxygen
- CO<sub>2</sub> - Carbon Dioxide
- CH<sub>4</sub> - Methane
- LEL - Lower Explosive Limit
- NM - Not measured
- U - Qualified as non-detect due to issues with the filter
- Value - Value is greater than LEL for methane (5 percent methane)

Source of weather data from July to November 2016:

[https://www.wunderground.com/history/airport/KDAY/2016/9/28/DailyHistory.html?req\\_city=&req\\_state=&req\\_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=](https://www.wunderground.com/history/airport/KDAY/2016/9/28/DailyHistory.html?req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=)

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)
5173 / 1 / Storage area ambient air, without filter	1/19/2012	11:50	0.9	22.1	0.1	0.0	ND(1) <sup>1</sup>			
5173 / 1 / C / Storage area, without filter		12:01	391	7.5	2.7	0.9	19			
5173 / 1 / Storage area ambient air, without filter	1/24/2012	10:00	0	21.5	0.0	0.0	0			
5173 / 1 / C / Storage area, without filter		10:09	96.7	5.5	2.8	0.9	19			
5173 / 1 / Storage area ambient air, without filter	1/31/2012	10:50	1	21.6	0.0	0.0	0			
5173 / 1 / C / Storage area, without filter		11:14	182.7	5.5	3.1	1.1	25			
5173 / 1 / Storage area ambient air, without filter	2/7/2012	10:44	0.1	21.7	0.1	0.0	0			
5173 / 1 / C / Storage area, without filter		10:56	142.3	10.9	1.8	0.9	21			
5173 / 1 / Storage area ambient air, without filter	2/16/2012	10:40	0.1	20.5	0.1	0.0	0			
5173 / 1 / C / Storage area with filter		11:04	79.4	14.1	3.1	0.5	10			
5173 / 1 / C / Storage area without filter		11:04	79.4	18.1	0.3	0.2	3			
5173 / 1 / Storage area ambient air, without filter	3/1/2012	11:36	0.1	21.4	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		12:46	196.5	13.8	0.2	0.3	7			
5173 / 1 / C / Storage area without filter		12:48	196.5	16.9	1.5	0.4	9			
5173 / 1 / Storage area ambient air	3/13/2012	9:32	0	20.1	0.8	0.0	0			
5173 / 1 / C / Storage area with filter		10:20	101.2	1.0	3.3	0.8	18			
5173 / 1 / C / Storage area without filter			101.2	0.4	4.7	1.4	27			
5173 / 1 / A ambient air without filter		9:57	0	21.0	0.1	0.0	0			
5173 / 1 / A with filter		10:15	0	16.9	3.0	0.0	0			
5173 / 1 / B ambient air without filter		9:30	0	21.4	0.0	0.0	0			
5173 / 1 / B with filter		9:48	0.2	9.1	7.9	0.0	0			
5173 / 1 / Storage area ambient air, without filter	3/22/2012	11:50	0	20.5	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		12:44	105.8	3.2	1.2	0.7	11			
5173 / 1 / C / Storage area without filter		12:47	105.8	3.0	5.1	1.1	24			
5173 / 1 / Storage area ambient air, without filter	3/27/2012		0.1	21.5	0.0	0.0	0			
5173 / 1 / C / Storage area with filter			17.1	3.9	1.9	0.9	17			
5173 / 1 / C / Storage area without filter		10:56	17.1	5.9	5.4	1.2	26			
5173 / 1 / Storage area ambient air, without filter	4/3/2012	12:30	0	21.0	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		13:09	136.8	1.9	0.4	0.8	19			
5173 / 1 / C / Storage area without filter		13:10	136.8	1.7	5.1	1.4	29			
5173 / 1 / Storage area ambient air, without filter	4/10/2012	11:05	0	21.6	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		11:52	206.1	3.0	0.5	0.8	19			
5173 / 1 / C / Storage area without filter		11:53	206.1	3.1	1.2	0.9	27			
5173 / 1 / Storage area ambient air, without filter	4/17/2012	10:15	0	21.5	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		10:32	129.8	2.3	2.2	0.9	19			
5173 / 1 / C / Storage area without filter		10:37	129.8	1.5	5.5	1.4	28			
5173 / 1 / Storage area ambient air, without filter	4/26/2012	11:13	0	21.0	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		11:27	120.7	2.2	1.7	0.9	10			
5173 / 1 / C / Storage area without filter		11:31	120.7	14.9	1.6	0.5	12			
5173 / 1 / Storage area ambient air, without filter	5/3/2012	11:33	0	20.2	0.1	0.0	0			
5173 / 1 / C / Storage area with filter		11:45	122.1	15.2	0.8	0.3	5			
5173 / 1 / C / Storage area without filter		11:48	122.1	9.5	3.4	0.7	14			
5173 / 1 / Storage area ambient air, without filter	5/10/2012	13:58	0	20.6	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		14:10	167.9	10.7	0.9	0.6	14			
5173 / 1 / C / Storage area without filter		14:11	167.9	7.8	3.8	0.9	18			
5173 / 1 / Storage area ambient air, without filter	5/15/2012		0	20.1	0.0	0.0	0			
5173 / 1 / C / Storage area with filter			80.4	10.7	0.2	0.5	10			
5173 / 1 / C / Storage area without filter			80.4	20.8	0.3	0.1	2			
5173 / 1 / Storage area ambient air, without filter	5/24/2012	13:15	0.0	20.8	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		13:39	107.1	1.2	6.2	0.9	18			
5173 / 1 / C / Storage area without filter		13:47	107.1	2.2	6.4	1.3	26			
5173 / 1 / Storage area ambient air, without filter	5/31/2012	11:04	0.0	20.4	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		11:14	116.6	8.7	1.5	0.3	7			
5173 / 1 / C / Storage area without filter		11:20	116.6	16.8	2.0	0.7	27			
5173 / 1 / Storage area ambient air, without filter	6/7/2012	10:24	0.0	20.9	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		10:33	102.2	0.9	6.2	1.1	22			
5173 / 1 / C / Storage area without filter		10:44	102.2	1.8	7.0	1.4	28			
5173 / 1 / Storage area ambient air, without filter	6/14/2012	10:55	0.0	20.4	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		11:07	72.0	5.5	3.5	0.7	20			
5173 / 1 / C / Storage area without filter		11:13	72.0	3.8	4.3	1.0	21			
5173 / 1 / Storage area ambient air, without filter	6/19/2012	10:33	0.0	20.2	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		10:55	78.0	1.8	2.3	1.3	26			
5173 / 1 / C / Storage area without filter		10:57	78.0	1.3	7.3	2.2	43			
5173 / 1 / Storage area ambient air, without filter	6/28/2012	10:01	0.0	20.4	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		10:11	65.7	5.8	3.2	0.7	21			
5173 / 1 / C / Storage area without filter		10:11	65.7	3.7	4.7	1.1	27			
5173 / 1 / Storage area ambient air, without filter	7/3/2012	10:15	0.0	19.7	0.0	0.0	0			
5173 / 1 / C / Storage area with filter		10:56	68.0	1.9	7.6	1.7	36			
5173 / 1 / C / Storage area without filter		10:58	68.0	1.9	6.4	1.9	25			

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location:		PID	O <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	LEL	Ambient	Summary of Recent	Barometric	
Parcel / Building / Probe	Date:	Time	(ppm)	(%)	(%)	(%)	Temperature (°F)	Precipitation	Pressure (hPa)	
5173 / 1	7/11/2012	Access unavailable								
5173 / 1 / Storage area ambient air, without filter	7/19/2012	13:15	0.1	20.4	0.0	0				
5173 / 1 / C / Storage area with filter		13:40	65.9	1.7	6.5	1.8				38
5173 / 1 / C / Storage area without filter		13:40	65.9	1.6	7.9	2.6				51
5173 / 1 / Storage area ambient air, without filter	7/26/2012	9:45	0.0	20.2	0.0	0				
5173 / 1 / C / Storage area with filter		9:54	0.0	2.4	6.2	1.9				43
5173 / 1 / C / Storage area without filter		9:54	0.0	1.0	7.7	3.2				63
5173 / 1 / Storage area ambient air, with filter	8/2/2012	9:40	0.0	20.6	0.0	0	90s	none		
5173 / 1 / Storage area ambient air, without filter		9:40	0.0	20.7	0.0	0				0
5173 / 1 / C / Storage area with filter		9:52	79.6	9.2	0.1	1.1				17
5173 / 1 / C / Storage area without filter		9:52	79.6	6.9	5.3	1.8				38
5173 / 1 / Storage area ambient air, with filter	8/7/2012	9:57	--	--	--	0	low 90s	none		
5173 / 1 / Storage area ambient air, without filter		9:57	0.3	20.7	0.1	0				0
5173 / 1 / C / Storage area with filter		10:06	--	--	--	--				43
5173 / 1 / C / Storage area without filter		10:06	116.5	3.7	6.7	2.9				57
5173 / 1 / A / Office area ambient air with filter	8/16/2012	11:55	0.1	20.3	0.0	0	80 - low 90s	none		
5173 / 1 / A / Office area ambient air without filter		11:55	0.1	20.2	0.0	0				0
5173 / 1 / A / Office area with filter		11:58	2.5	19.5	0.3	0				0
5173 / 1 / A / Office area without filter		11:58	2.5	19.7	0.9	0				0
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		11:52	0.3	20.6	0.0	0				0
5173 / 1 / Storage area ambient air, without filter		11:52	0.3	20.6	0.0	0				0
5173 / 1 / C / Storage area with filter		12:26	100.7	0.5	6.1	2.2				47
5173 / 1 / C / Storage area without filter		12:26	100.7	1.3	6.7	3.1				62
5173 / 1 / A / Office area ambient air with filter	8/21/2012	14:05	0.0	21.1	0.0	0	80s	none		
5173 / 1 / A / Office area ambient air without filter		14:05	0.0	21.0	0.0	0				0
5173 / 1 / A / Office area with filter		14:20	2.0	19.5	0.1	0				0
5173 / 1 / A / Office area without filter		14:20	2.0	19.7	0.8	0				0
5173 / 1 / B / Firing Range ambient air with filter		13:45	0.0	20.4	0.0	0				0
5173 / 1 / B / Firing Range ambient air without filter		13:45	0.0	20.4	0.0	0				0
5173 / 1 / B / Firing Range with filter		13:55	2.3	4.4	12.2	0				0
5173 / 1 / B / Firing Range without filter		13:55	2.3	6.3	11.0	0				0
5173 / 1 / Storage area ambient air, with filter		14:25	0.0	21.1	0.0	0				0
5173 / 1 / Storage area ambient air, without filter		14:25	0.0	21.4	0.0	0				0
5173 / 1 / C / Storage area with filter		14:37	110.9	0.5	5.0	2.1				42
5173 / 1 / C / Storage area without filter		14:37	110.9	4.8	5.1	2.3				46
5173 / 1 / A / Office area ambient air without filter	8/30/2012		0.0	20.0	0.0	0	80s	none		
5173 / 1 / A / Office area with filter		13:44	0.5	19.5	0.9	0				0
5173 / 1 / A / Office area without filter		13:44	0.5	19.4	1.0	0				0
5173 / 1 / B / Firing Range ambient air without filter		13:57	0.0	20.7	0.0	0				0
5173 / 1 / B / Firing Range with filter		14:07	1.2	5.5	11.0	0				0
5173 / 1 / B / Firing Range without filter		14:07	1.2	5.3	11.6	0				0
5173 / 1 / Storage area ambient air, without filter		13:03	0.0	20.5	0.0	0				0
5173 / 1 / C / Storage area with filter		13:21	39.1	1.4	3.8	1.9				39
5173 / 1 / C / Storage area without filter		13:21	39.1	0.9	6.6	2.8				57
5173 / 1 / A / Office area ambient air with filter	9/6/2012		0.0	20.6	0.0	0	80s	rain daily during week of September 2 to 6		
5173 / 1 / A / Office area ambient air without filter			0.0	20.8	0.0	0				0
5173 / 1 / A / Office area with filter		14:07	3.8	19.4	0.1	0				0
5173 / 1 / A / Office area without filter		14:07	3.8	19.2	0.9	0				0
5173 / 1 / B / Firing Range ambient air with filter			0.0	20.3	0.0	0				0
5173 / 1 / B / Firing Range ambient air without filter			0.0	20.4	0.0	0				0
5173 / 1 / B / Firing Range with filter		14:00	3.8	62.0	9.9	0				0
5173 / 1 / B / Firing Range without filter		14:00	3.8	63.0	11.4	0				0
5173 / 1 / Storage area ambient air, with filter		13:20	0.0	20.3	0.0	0				0
5173 / 1 / Storage area ambient air, without filter		13:20	0.0	20.2	0.0	0				0
5173 / 1 / C / Storage area with filter		13:41	140.4	0.9	5.0	1.9				38
5173 / 1 / C / Storage area without filter		13:41	140.4	0.8	6.3	2.8				58
5173 / 1 / A / Office area ambient air with filter	9/13/2012		0.0	20.9	0.0	0	high 70s - low 80s	none		
5173 / 1 / A / Office area ambient air without filter			0.0	20.7	0.0	0				0
5173 / 1 / A / Office area with filter		12:08	0.5	19.6	0.2	0				0
5173 / 1 / A / Office area without filter		12:08	0.5	19.2	1.0	0				0
5173 / 1 / B / Firing Range ambient air with filter			0.0	21.3	0.0	0				0
5173 / 1 / B / Firing Range ambient air without filter			0.0	21.1	0.0	0				0
5173 / 1 / B / Firing Range with filter		12:23	1.9	5.8	9.7	0				0
5173 / 1 / B / Firing Range without filter		12:23	1.9	5.5	11.8	0				0
5173 / 1 / Storage area ambient air, with filter			0.0	21.2	0.0	0				0
5173 / 1 / Storage area ambient air, without filter			0.0	21.2	0.0	0				0
5173 / 1 / C / Storage area with filter			60.2	0.8	5.1	2.3				45
5173 / 1 / C / Storage area without filter			60.2	1.0	6.0	2.7				55

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	9/20/2012	11:55	0.0	20.3	0.1	0.0	low 70s	none		
5173 / 1 / A / Office area ambient air without filter		11:55	0.0	20.3	0.0	0.0				
5173 / 1 / A / Office area with filter		12:04	0.6	18.0	0.2	0.0				
5173 / 1 / A / Office area without filter		12:04	0.6	17.8	1.5	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		12:15	0.0	20.9	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		12:15	0.0	20.9	0.0	0.0				
5173 / 1 / C / Storage area with filter		12:23	88.5	1.9	4.5	2.0				
5173 / 1 / C / Storage area without filter		12:23	88.5	1.8	5.3	2.6				
5173 / 1 / SIM Trainer	9/27/2012	Inaccessible					60s - 70s	none		
5173 / 1 / A / Office area ambient air with filter	10/2/2012	13:05	0.0	21.1	0.0	0.0	mid 60s	light rain		
5173 / 1 / A / Office area ambient air without filter		13:05	0.0	21.1	0.0	0.0				
5173 / 1 / A / Office area with filter		13:09	0.7	15.6	0.7	0.0				
5173 / 1 / A / Office area without filter		13:09	0.7	17.4	1.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		12:50	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		12:50	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range with filter		13:00	0.7	4.6	10.3	0.0				
5173 / 1 / B / Firing Range without filter		13:00	0.7	4.7	10.5	0.0				
5173 / 1 / Storage area ambient air, with filter		13:13	0.0	21.2	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:13	0.0	21.2	0.0	0.0				
5173 / 1 / C / Storage area with filter		13:17	57.3	0.8	5.8	2.0				
5173 / 1 / C / Storage area without filter		13:17	57.3	0.9	5.0	2.8				
5173 / 1 / A / Office area ambient air with filter	10/18/2012	13:15	0.0	21.2	0.1	0.0	mid 70s	none		
5173 / 1 / A / Office area ambient air without filter		13:15	0.0	21.3	0.0	0.0				
5173 / 1 / A / Office area with filter		13:44	0.8	16.3	2.4	0.0				
5173 / 1 / A / Office area without filter		13:44	0.8	16.2	2.5	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:17	0.0	21.3	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:17	0.0	21.3	0.0	0.0				
5173 / 1 / C / Storage area with filter		13:50	104.2	1.8	3.8	1.5				
5173 / 1 / C / Storage area without filter		13:50	104.2	1.9	4.3	1.9				
5173 / 1 / A / Office area ambient air with filter	10/25/2012	13:35	0.0	21.0	0.1	0.0	70s	none		
5173 / 1 / A / Office area ambient air without filter		13:35	0.0	21.0	0.1	0.0				
5173 / 1 / A / Office area with filter		14:17	2.4	15.6	0.8	0.0				
5173 / 1 / A / Office area without filter		14:17	2.4	15.2	2.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:06	0.0	20.5	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:06	0.0	20.3	0.0	0.0				
5173 / 1 / B / Firing Range with filter		14:20	1.0	3.8	9.6	0.0				
5173 / 1 / B / Firing Range without filter		14:20	1.0	4.1	10.0	0.0				
5173 / 1 / Storage area ambient air, with filter		13:20	0.0	21.0	0.1	0.0				
5173 / 1 / Storage area ambient air, without filter		13:20	0.0	20.9	0.0	0.0				
5173 / 1 / C / Storage area with filter		14:24	72.9	1.3	3.7	1.5				
5173 / 1 / C / Storage area without filter		14:24	72.9	1.4	4.1	2.0				
5173 / 1 / A / Office area ambient air with filter	10/30/2012	13:35	0.0	21.9	0.1	0.0	30s - 40s	snow & rain		
5173 / 1 / A / Office area ambient air without filter		13:35	0.0	21.9	0.1	0.0				
5173 / 1 / A / Office area with filter		14:55	1.6	14.2	1.8	0.0				
5173 / 1 / A / Office area without filter		14:55	1.6	14.3	3.2	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:48	0.0	21.3	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:48	0.0	21.4	0.0	0.0				
5173 / 1 / B / Firing Range with filter		15:02	1.6	4.0	9.5	0.0				
5173 / 1 / B / Firing Range without filter		15:02	1.6	4.1	10.5	0.0				
5173 / 1 / Storage area ambient air, with filter		13:20	0.0	22.2	0.1	0.0				
5173 / 1 / Storage area ambient air, without filter		13:20	0.0	22.1	0.1	0.0				
5173 / 1 / C / Storage area with filter		15:06	79.5	1.2	4.3	1.6				
5173 / 1 / C / Storage area without filter		15:06	79.5	1.4	4.1	2.1				
5173 / 1 / A / Office area ambient air with filter	11/8/2012	14:02	1.4	21.4	0.1	0.0	30s - 40s	none		
5173 / 1 / A / Office area ambient air without filter		14:02	1.4	21.5	0.1	0.0				
5173 / 1 / A / Office area with filter		15:21	4.2	13.7	3.2	0.0				
5173 / 1 / A / Office area without filter		15:21	4.2	13.7	3.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		14:15	1.2	21.0	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		14:15	1.2	21.1	0.0	0.0				
5173 / 1 / B / Firing Range with filter		15:26	1.8	4.5	9.5	0.0				
5173 / 1 / B / Firing Range without filter		15:26	1.8	4.8	9.9	0.0				
5173 / 1 / Storage area ambient air, with filter		13:35	1.3	20.9	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:35	1.3	21.1	0.0	0.0				
5173 / 1 / C / Storage area with filter		15:36	165.5	1.2	3.2	1.4				
5173 / 1 / C / Storage area without filter		15:36	165.5	2.2	3.5	1.6				

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	11/15/2012	13:37	0.0	21.7	0.2	0.0	30s - 40s	none		
5173 / 1 / A / Office area ambient air without filter		13:37	0.0	21.8	0.1	0.0				
5173 / 1 / A / Office area with filter		15:32	0.0	14.3	3.3	0.0				
5173 / 1 / A / Office area without filter		15:32	0.0	14.6	3.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:58	0.0	21.7	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:58	0.0	21.9	0.0	0.0				
5173 / 1 / B / Firing Range with filter		15:43	0.0	4.3	9.5	0.0				
5173 / 1 / B / Firing Range without filter		15:43	0.0	4.5	9.8	0.0				
5173 / 1 / Storage area ambient air, with filter		13:15	0.0	21.8	0.2	0.0				
5173 / 1 / Storage area ambient air, without filter		13:15	0.0	21.4	0.0	0.0				
5173 / 1 / C / Storage area with filter		15:45	92.6	1.4	2.5	1.0				
5173 / 1 / C / Storage area without filter		15:45	92.6	1.4	3.4	1.3				
5173 / 1 / A / Office area ambient air with filter	11/20/2012	13:03	0.0	20.9	0.1	0.0	50s	Trace		
5173 / 1 / A / Office area ambient air without filter		13:03	0.0	20.9	0.1	0.0				
5173 / 1 / A / Office area with filter		14:45	0.0	13.8	3.2	0.0				
5173 / 1 / A / Office area without filter		14:45	0.0	13.9	3.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:09	0.0	21.0	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:09	0.0	21.1	0.0	0.0				
5173 / 1 / B / Firing Range with filter		14:50	0.0	4.6	9.7	0.0				
5173 / 1 / B / Firing Range without filter		14:50	0.0	4.7	10.1	0.0				
5173 / 1 / Storage area ambient air, with filter		13:08	0.0	20.9	0.1	0.0				
5173 / 1 / Storage area ambient air, without filter		13:08	0.0	21.0	0.0	0.0				
5173 / 1 / C / Storage area with filter		14:53	183.7	13.6	1.3	0.4				
5173 / 1 / C / Storage area without filter		14:53	183.7	10.8	1.8	0.8				
5173 / 1 / A / Office area ambient air with filter	11/29/2012	12:31	0.6	21.3	0.1	0.0	40s - 50s	None		
5173 / 1 / A / Office area ambient air without filter		12:31	0.6	21.3	0.1	0.0				
5173 / 1 / A / Office area with filter		14:05	1.8	13.1	4.0	0.0				
5173 / 1 / A / Office area without filter		14:05	1.8	13.3	4.1	0.0				
5173 / 1 / B / Firing Range ambient air with filter		12:40	0.4	21.2	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter		12:40	0.4	21.2	0.1	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		12:37	0.3	21.3	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		12:37	0.3	21.3	0.0	0.0				
5173 / 1 / C / Storage area with filter		14:23	120.4	2.4	2.8	1.1				
5173 / 1 / C / Storage area without filter		14:23	120.4	2.2	3.0	1.5				
5173 / 1 / A / Office area ambient air with filter		12/4/2012	13:26	0.0	21.3	0.0				0.0
5173 / 1 / A / Office area ambient air without filter	13:26		0.0	21.2	0.1	0.0				
5173 / 1 / A / Office area with filter	15:29		0.1	13.6	4.5	0.0				
5173 / 1 / A / Office area without filter	15:29		0.1	13.7	4.2	0.0				
5173 / 1 / B / Firing Range ambient air with filter	14:17		0.0	21.0	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter	14:17		0.0	21.0	0.0	0.0				
5173 / 1 / B / Firing Range with filter	15:34		0.2	9.1	7.1	0.0				
5173 / 1 / B / Firing Range without filter	15:34		0.2	9.1	7.3	0.0				
5173 / 1 / Storage area ambient air, with filter	13:07		0.0	21.4	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter	13:07		0.0	21.0	0.0	0.0				
5173 / 1 / C / Storage area with filter	15:39		66.6	1.6	4.2	1.0				
5173 / 1 / C / Storage area without filter	15:39		66.6	1.6	3.6	1.3				
5173 / 1 / A / Office area ambient air with filter	12/13/2012	14:18	0.0	22.0	0.0	0.0	40s	sunny		
5173 / 1 / A / Office area ambient air without filter		14:18	0.0	22.0	0.0	0.0				
5173 / 1 / A / Office area with filter		15:17	0.0	14.9	2.5	0.1 U				
5173 / 1 / A / Office area without filter		15:17	0.0	14.6	4.2	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:54	0.0	22.0	0.0	0.1 U				
5173 / 1 / B / Firing Range ambient air without filter		13:54	0.0	21.8	0.1	0.0				
5173 / 1 / B / Firing Range with filter		15:23	1.6	6.4	8.8	0.0				
5173 / 1 / B / Firing Range without filter		15:23	1.6	6.1	9.7	0.1				
5173 / 1 / Storage area ambient air, with filter		13:58	0.0	22.0	0.1	0.1 U				
5173 / 1 / Storage area ambient air, without filter		13:58	0.0	22.1	0.1	0.0				
5173 / 1 / C / Storage area with filter		15:34	109.7	2.0	2.6	1.0				
5173 / 1 / C / Storage area without filter		15:34	109.7	1.9	3.2	1.2				
5173 / 1 / A / Office area ambient air with filter	12/18/2012	13:55	0.0	21.7	0.1	0.0	40s	none		
5173 / 1 / A / Office area ambient air without filter		13:55	0.0	21.6	0.2	0.0				
5173 / 1 / A / Office area with filter		14:41	0.8	14.9	3.8	0.0				
5173 / 1 / A / Office area without filter		14:41	0.8	14.7	4.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		14:04	0.0	21.5	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter		14:04	0.0	21.6	0.1	0.0				
5173 / 1 / B / Firing Range with filter		14:51	0.7	6.2	9.3	0.0				
5173 / 1 / B / Firing Range without filter		14:51	0.7	6.4	9.7	0.0				
5173 / 1 / Storage area ambient air, with filter		13:58	0.0	21.4	0.3	0.0				
5173 / 1 / Storage area ambient air, without filter		13:58	0.0	21.4	0.4	0.0				
5173 / 1 / C / Storage area with filter		14:56	114.9	1.3	3.8	0.9				
5173 / 1 / C / Storage area without filter		14:56	114.9	1.4	3.6	1.3				

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)
5173 / 1 / A / Office area ambient air with filter 5173 / 1 / A / Office area ambient air without filter 5173 / 1 / A / Office area with filter 5173 / 1 / A / Office area without filter 5173 / 1 / B / Firing Range ambient air with filter 5173 / 1 / B / Firing Range ambient air without filter 5173 / 1 / B / Firing Range with filter 5173 / 1 / B / Firing Range without filter 5173 / 1 / Storage area ambient air, with filter 5173 / 1 / Storage area ambient air, without filter 5173 / 1 / C / Storage area with filter 5173 / 1 / C / Storage area without filter	12/27/2012	13:05 0.0 13:05 0.0 14:15 0.7 14:15 0.7 13:03 0.0 13:03 0.0 14:25 0.5 14:25 0.5 13:00 0.0 13:00 0.0 14:35 75.0 14:35 75.0	21.0 21.0 15.4 15.5 21.1 21.1 8.1 7.8 21.0 21.0 16.5 12.0	0.0 0.0 4.1 4.1 0.0 0.0 8.7 9.0 0.0 0.0 1.1 1.5	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.3 0.5	0 0 0 0 0 0 0 0 0 0 5 10	30s	none	
5173 / 1 / A / Office area ambient air with filter 5173 / 1 / A / Office area ambient air without filter 5173 / 1 / A / Office area with filter 5173 / 1 / A / Office area without filter 5173 / 1 / B / Firing Range ambient air with filter 5173 / 1 / B / Firing Range ambient air without filter 5173 / 1 / B / Firing Range with filter 5173 / 1 / B / Firing Range without filter 5173 / 1 / Storage area ambient air, with filter 5173 / 1 / Storage area ambient air, without filter 5173 / 1 / C / Storage area with filter 5173 / 1 / C / Storage area without filter	1/3/2013	12:50 0.1 12:50 0.1 14:15 0.3 14:15 0.3 12:57 0.0 12:57 0.0 14:26 0.4 14:26 0.4 12:55 0.0 12:55 0.0 14:34 90.4 14:34 90.4	21.2 21.2 17.9 16.9 21.2 21.2 8.7 8.7 21.3 21.3 4.0 2.5	0.1 0.1 2.4 3.2 0.0 0.0 8.4 8.4 0.0 0.0 2.6 2.7	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.7 1.1	0 0 0 0 0 0 0 0 0 0 15 22	10s - 20s	None	
5173 / 1 / A / Office area ambient air with filter 5173 / 1 / A / Office area ambient air without filter 5173 / 1 / A / Office area with filter 5173 / 1 / A / Office area without filter 5173 / 1 / B / Firing Range ambient air with filter 5173 / 1 / B / Firing Range ambient air without filter 5173 / 1 / B / Firing Range with filter 5173 / 1 / B / Firing Range without filter 5173 / 1 / Storage area ambient air, with filter 5173 / 1 / Storage area ambient air, without filter 5173 / 1 / C / Storage area with filter 5173 / 1 / C / Storage area without filter	1/10/2013	13:28 0.0 13:28 0.0 14:24 1.0 14:24 1.0 13:26 0.1 13:26 0.1 14:30 0.9 14:30 0.9 13:24 0.1 13:24 0.1 14:45 52.2 14:45 52.2	21.1 21.0 16.0 16.0 20.8 21.0 9.1 9.4 21.0 21.0 3.1 3.2	0.1 0.0 3.7 3.9 0.2 0.1 7.8 7.9 0.1 0.1 0.6 0.9	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 1.7	0 0 0 0 0 0 0 0 0 0 12 17	30s	Trace	
5173 / 1 / A / Office area ambient air with filter 5173 / 1 / A / Office area ambient air without filter 5173 / 1 / A / Office area with filter 5173 / 1 / A / Office area without filter 5173 / 1 / B / Firing Range ambient air with filter 5173 / 1 / B / Firing Range ambient air without filter 5173 / 1 / B / Firing Range with filter 5173 / 1 / B / Firing Range without filter 5173 / 1 / Storage area ambient air, with filter 5173 / 1 / Storage area ambient air, without filter 5173 / 1 / C / Storage area with filter 5173 / 1 / C / Storage area without filter	1/17/2013	13:10 0.0 13:10 0.0 14:00 1.0 14:00 1.0 13:08 0.1 13:08 0.1 14:07 0.3 14:07 0.3 13:06 0.1 13:06 0.1 14:21 92.9 14:21 92.9	21.3 21.4 13.5 13.5 21.3 21.3 8.9 8.9 21.3 21.3 1.5 1.6	0.1 0.0 4.2 4.3 0.1 0.0 8.5 8.7 0.1 0.1 3.3 3.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.8 1.0	0 0 0 0 0 0 0 0 0 0 16 21	30s	None	
5173 / 1 / A / Office area ambient air with filter 5173 / 1 / A / Office area ambient air without filter 5173 / 1 / A / Office area with filter 5173 / 1 / A / Office area without filter 5173 / 1 / B / Firing Range ambient air with filter 5173 / 1 / B / Firing Range ambient air without filter 5173 / 1 / B / Firing Range with filter 5173 / 1 / B / Firing Range without filter 5173 / 1 / Storage area ambient air, with filter 5173 / 1 / Storage area ambient air, without filter 5173 / 1 / C / Storage area with filter 5173 / 1 / C / Storage area without filter	1/24/2013	13:45 0.0 13:45 0.0 15:56 0.0 15:56 0.0 13:36 0.0 13:36 0.0 16:01 0.4 16:01 0.4 13:25 0.0 13:25 0.0 16:08 53.0 16:08 53.0	22.2 21.9 16.2 15.9 22.4 22.4 7.2 8.7 21.3 20.9 2.5 1.9	0.1 0.1 2.9 4.1 0.0 0.0 8.2 9.0 0.0 0.0 2.8 2.8	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 0.9	0 0 0 0 0 0 0 0 0 0 12 18	10 - 20s	None	



Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	1/31/2013	13:33	0.0	22.1	0.1	0.0	0	10 - 20s	None		
5173 / 1 / A / Office area ambient air without filter		13:33	0.0	22.2	0.1	0.0	0				
5173 / 1 / A / Office area with filter		15:35	0.1	15.7	2.6	0.0	0				
5173 / 1 / A / Office area without filter		15:35	0.1	14.8	4.4	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		14:10	0.0	22.3	0.1	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		14:10	0.0	22.6	0.1	0.0	0				
5173 / 1 / B / Firing Range with filter		15:41	0.2	6.4	9.0	0.0	0				
5173 / 1 / B / Firing Range without filter		15:41	0.2	6.6	9.5	0.0	0				
5173 / 1 / Storage area ambient air, with filter		13:17	0.0	22.1	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:17	0.0	21.8	0.1	0.0	0				
5173 / 1 / C / Storage area with filter		15:46	76.7	1.9	4.3	0.6	12				
5173 / 1 / C / Storage area without filter		15:46	76.7	1.6	3.2	0.9	19				
5173 / 1 / A / Office area ambient air with filter	2/7/2013	14:07	0.4	21.8	0.1	0.0	0	20s - 50s	none		
5173 / 1 / A / Office area ambient air without filter		14:07	0.4	21.8	0.2	0.0	0				
5173 / 1 / A / Office area with filter		15:09	0.8	15.4	3.5	0.0	0				
5173 / 1 / A / Office area without filter		15:09	0.8	15.0	4.2	0.0	0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter		13:54	0.2	21.4	0.1	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:54	0.2	21.2	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		15:21	135.7	2.0	3.4	0.6	13				
5173 / 1 / C / Storage area without filter		15:21	135.7	1.5	3.0	0.9	19				
5173 / 1 / A / Office area ambient air with filter	2/12/2013	13:01	0.1	21.2	0.0	0.0	0	30s - 40s	none		
5173 / 1 / A / Office area ambient air without filter		13:01	0.1	21.2	0.1	0.0	0				
5173 / 1 / A / Office area with filter		14:30	0.9	15.4	3.6	0.0	0				
5173 / 1 / A / Office area without filter		14:30	0.9	15.2	4.3	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		13:03	0.0	21.2	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		13:03	0.0	21.2	0.0	0.0	0				
5173 / 1 / B / Firing Range with filter		14:23	0.4	9.4	7.9	0.0	0				
5173 / 1 / B / Firing Range without filter		14:23	0.4	9.1	7.5	0.0	0				
5173 / 1 / Storage area ambient air, with filter		12:59	0.0	21.2	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		12:59	0.0	21.2	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		14:38	109.2	1.9	3.3	0.5	10				
5173 / 1 / C / Storage area without filter		14:38	109.2	3.0	3.0	0.7	13				
5173 / 1 / A / Office area ambient air with filter	2/21/2013	13:07	0.0	22.3	0.0	0.0	0	20s	trace		
5173 / 1 / A / Office area ambient air without filter		13:07	0.0	22.3	0.1	0.0	0				
5173 / 1 / A / Office area with filter		0.9	16.0	3.4	0.0	0					
5173 / 1 / A / Office area without filter		0.9	16.0	4.0	0.0	0					
5173 / 1 / B / Firing Range ambient air with filter		13:09	0.1	22.3	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		13:09	0.1	22.3	0.1	0.0	0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter		13:12	0.1	22.2	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:12	0.1	22.3	0.1	0.0	0				
5173 / 1 / C / Storage area with filter		90.5	1.8	3.0	0.7	13					
5173 / 1 / C / Storage area without filter		90.5	2.0	2.9	0.9	18					
5173 / 1 / A / Office area ambient air with filter	2/28/2013	13:03	0.0	21.1	0.1	0.0	0	30s - 40s	~1 inch		
5173 / 1 / A / Office area ambient air without filter		13:03	0.0	21.1	0.1	0.0	0				
5173 / 1 / A / Office area with filter		14:31	0.6	14.7	4.0	0.0	0				
5173 / 1 / A / Office area without filter		14:31	0.6	14.7	4.4	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		13:21	0.0	21.3	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		13:21	0.0	21.3	0.0	0.0	0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter		13:15	0.0	21.2	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:15	0.0	21.2	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		14:36	63.0	2.3	3.2	0.6	13				
5173 / 1 / C / Storage area without filter		14:36	63.0	2.4	3.1	0.8	16				
5173 / 1 / A / Office area ambient air with filter		3/7/2013	14:00	0.4	21.2	0.1	0.0				0
5173 / 1 / A / Office area ambient air without filter	14:00		0.4	21.2	0.1	0.0	0				
5173 / 1 / A / Office area with filter	14:13		0.0	16.4	2.4	0.0	0				
5173 / 1 / A / Office area without filter	14:13		0.0	15.2	4.4	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter	13:50		0.4	21.6	0.1	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter	13:50		0.4	21.6	0.1	0.0	0				
5173 / 1 / B / Firing Range with filter	14:17		0.0	9.1	7.1	0.0	0				
5173 / 1 / B / Firing Range without filter	14:17		0.0	6.9	9.8	0.0	0				
5173 / 1 / Storage area ambient air, with filter	13:40		0.3	21.5	0.3	0.0	0				
5173 / 1 / Storage area ambient air, without filter	13:40		0.3	21.5	0.1	0.0	0				
5173 / 1 / C / Storage area with filter	14:21		47.0	5.1	5.0	0.4	8				
5173 / 1 / C / Storage area without filter	14:21		47.0	3.1	3.1	0.8	15				

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	3/14/2013	13:04	0.0	21.1	0.1	0.0	0	20s - 40s	None		
5173 / 1 / A / Office area ambient air without filter		13:04	0.0	21.2	0.1	0.0	0				
5173 / 1 / A / Office area with filter		14:36	0.0	15.2	4.1	0.0	0				
5173 / 1 / A / Office area without filter		14:36	0.0	15.2	4.6	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		13:33	0.0	21.8	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		13:33	0.0	21.7	0.0	0.0	0				
5173 / 1 / B / Firing Range with filter		14:30	0.1	9.4	9.1	0.0	0				
5173 / 1 / B / Firing Range without filter		14:30	0.1	9.6	8.8	0.0	0				
5173 / 1 / Storage area ambient air, with filter		13:18	0.0	21.3	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:18	0.0	21.4	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		14:53	80.1	2.3	3.0	0.4	8				
5173 / 1 / C / Storage area without filter		14:53	80.1	2.4	3.3	0.6	13				
5173 / 1 / A / Office area ambient air with filter	3/21/2013	13:40	0.0	21.2	0.1	0.0	0	20s - 30s	Trace		
5173 / 1 / A / Office area ambient air without filter		13:40	0.0	21.3	0.1	0.0	0				
5173 / 1 / A / Office area with filter		14:04	0.0	15.1	4.8	0.0	0				
5173 / 1 / A / Office area without filter		14:04	0.0	15.1	4.4	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		13:15	0.0	21.7	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		13:15	0.0	21.8	0.0	0.0	0				
5173 / 1 / B / Firing Range with filter		13:57	0.0	6.7	9.5	0.0	0				
5173 / 1 / B / Firing Range without filter		13:57	0.0	6.8	9.8	0.0	0				
5173 / 1 / Storage area ambient air, with filter		13:17	0.0	21.8	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:17	0.0	21.8	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		14:11	85.5	4.7	3.6	0.5	11				
5173 / 1 / C / Storage area without filter		14:11	85.5	2.5	3.3	0.8	17				
5173 / 1 / A / Office area ambient air with filter	3/28/2013	12:41	0.0	21.3	0.0	0.0	0	30s - 40s	None		
5173 / 1 / A / Office area ambient air without filter		12:41	0.0	21.3	0.0	0.0	0				
5173 / 1 / A / Office area with filter		13:21	0.0	15.4	5.4	0.0	0				
5173 / 1 / A / Office area without filter		13:21	0.0	15.5	4.4	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		12:42	0.0	21.3	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		12:42	0.0	21.3	0.0	0.0	0				
5173 / 1 / B / Firing Range with filter		13:16	0.0	7.3	9.1	0.0	0				
5173 / 1 / B / Firing Range without filter		13:16	0.0	7.2	9.8	0.0	0				
5173 / 1 / Storage area ambient air, with filter		12:44	0.0	21.3	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		12:44	0.0	21.3	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		13:27	109.0	3.1	3.4	0.6	12				
5173 / 1 / C / Storage area without filter		13:27	109.0	3.3	3.2	0.8	16				
5173 / 1 / A / Office area ambient air with filter	4/4/2013	13:27	0.0	21.3	0.0	0.0	0	30s - 50s	None		
5173 / 1 / A / Office area ambient air without filter		13:27	0.0	21.3	0.0	0.0	0				
5173 / 1 / A / Office area with filter		14:31	0.4	16.1	3.3	0.0	0				
5173 / 1 / A / Office area without filter		14:31	0.4	15.9	3.8	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		13:32	0.0	21.2	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		13:32	0.0	21.2	0.0	0.0	0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter		13:31	0.0	21.2	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:31	0.0	21.2	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		14:38	87.2	11.7	1.8	0.4	7				
5173 / 1 / C / Storage area without filter		14:38	87.2	13.3	1.6	0.4	8				
5173 / 1 / A / Office area ambient air with filter		4/9/2013	13:23	0.0	20.4	0.0	0.0				0
5173 / 1 / A / Office area ambient air without filter	13:23		0.0	20.5	0.0	0.0	0				
5173 / 1 / A / Office area with filter	14:19		1.1	15.5	3.8	0.0	0				
5173 / 1 / A / Office area without filter	14:19		1.1	15.6	4.2	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter	13:30		0.0	20.6	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter	13:30		0.0	20.6	0.0	0.0	0				
5173 / 1 / B / Firing Range with filter	14:26		1.3	6.5	9.5	0.0	0				
5173 / 1 / B / Firing Range without filter	14:26		1.3	10.0	8.6	0.0	0				
5173 / 1 / Storage area ambient air, with filter	13:31		0.0	20.6	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter	13:31		0.0	20.6	0.0	0.0	0				
5173 / 1 / C / Storage area with filter	14:31		102.1	3.5	3.8	0.5	11				
5173 / 1 / C / Storage area without filter	14:31		102.1	3.7	3.6	0.7	14				
5173 / 1 / A / Office area ambient air with filter	4/18/2013	12:30	0.7	20.6	0.0	0.0	0	60s - 80s	None		
5173 / 1 / A / Office area ambient air without filter		12:30	0.7	20.6	0.0	0.0	0				
5173 / 1 / A / Office area with filter		14:15	1.1	15.2	4.3	0.0	0				
5173 / 1 / A / Office area without filter		14:15	1.1	15.2	4.5	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		12:37	0.0	20.4	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		12:37	0.0	20.4	0.0	0.0	0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter		12:35	0.1	20.4	0.2	0.0	0				
5173 / 1 / Storage area ambient air, without filter		12:35	0.1	20.4	0.1	0.0	0				
5173 / 1 / C / Storage area with filter		14:21	134.9	1.6	5.2	0.6	13				
5173 / 1 / C / Storage area without filter		14:21	134.9	1.7	5.3	0.9	18				

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)		
5173 / 1 / A / Office area ambient air with filter	4/23/2013	14:09	0.0	21.4	0.0	0.0	0	50s - 60s	None			
5173 / 1 / A / Office area ambient air without filter		14:09	0.0	21.4	0.1	0.0	0					
5173 / 1 / A / Office area with filter		14:55	0.3	16.1	3.0	0.0	0					
5173 / 1 / A / Office area without filter		14:55	0.3	15.9	4.0	0.0	0					
5173 / 1 / B / Firing Range ambient air with filter		13:52	0.0	20.6	0.1	0.0	0					
5173 / 1 / B / Firing Range ambient air without filter		13:52	0.0	20.6	0.0	0.0	0					
5173 / 1 / B / Firing Range with filter		14:59	0.2	6.9	10.4	0.0	0					
5173 / 1 / B / Firing Range without filter		14:59	0.2	6.9	10.8	0.0	0					
5173 / 1 / Storage area ambient air, with filter		14:00	0.0	21.3	0.0	0.0	0					
5173 / 1 / Storage area ambient air, without filter		14:00	0.0	21.4	0.0	0.0	0					
5173 / 1 / C / Storage area with filter		15:04	77.6	3.5	4.1	0.5	10					
5173 / 1 / C / Storage area without filter		15:04	77.6	3.5	4.6	0.8	16					
5173 / 1 / A / Office area ambient air with filter	4/30/2013	13:39	0.0	21.3	0.0	0.0	0	40s - 70s	None			
5173 / 1 / A / Office area ambient air without filter		13:39	0.0	21.3	0.0	0.0	0					
5173 / 1 / A / Office area with filter		14:58	0.0	16.7	3.1	0.0	0					
5173 / 1 / A / Office area without filter		14:58	0.0	16.6	3.8	0.0	0					
5173 / 1 / B / Firing Range ambient air with filter		13:16	0.0	20.1	0.0	0.0	0					
5173 / 1 / B / Firing Range ambient air without filter		13:16	0.0	20.2	0.0	0.0	0					
5173 / 1 / B / Firing Range with filter		15:02	0.5	7.1	9.6	0.0	0					
5173 / 1 / B / Firing Range without filter		15:02	0.5	6.8	10.6	0.0	0					
5173 / 1 / Storage area ambient air, with filter		13:21	0.0	20.6	0.0	0.0	0					
5173 / 1 / Storage area ambient air, without filter		13:21	0.0	21.0	0.0	0.0	0					
5173 / 1 / C / Storage area with filter		15:06	60.1	2.5	5.8	0.5	10					
5173 / 1 / C / Storage area without filter		15:06	60.1	2.6	4.9	0.8	17					
5173 / 1 / A / Office area ambient air with filter	5/9/2013	13:35	0.0	20.6	0.0	0.0	0	50s - 70s	None			
5173 / 1 / A / Office area ambient air without filter		13:35	0.0	20.6	20.7	0.0	0					
5173 / 1 / A / Office area with filter		14:49	0.0	17.5	1.8	0.0	0					
5173 / 1 / A / Office area without filter		14:49	0.0	17.3	2.8	0.0	0					
5173 / 1 / B / Firing Range ambient air with filter		13:19	0.0	19.5	0.0	0.0	0					
5173 / 1 / B / Firing Range ambient air without filter		13:19	0.0	19.6	0.0	0.0	0					
5173 / 1 / B / Firing Range with filter		14:51	0.4	7.0	10.3	0.0	0					
5173 / 1 / B / Firing Range without filter		14:51	0.4	7.1	10.8	0.0	0					
5173 / 1 / Storage area ambient air, with filter		13:27	0.0	20.0	0.0	0.0	0					
5173 / 1 / Storage area ambient air, without filter		13:27	0.0	20.1	0.0	0.0	0					
5173 / 1 / C / Storage area with filter		14:55	31.5	2.2	5.8	0.6	12					
5173 / 1 / C / Storage area without filter		14:55	31.5	2.3	5.5	0.9	18					
5173 / 1 / A / Office area ambient air with filter	5/16/2013	12:30	0.0	20.7	0.0	0.0	0	40s - 80s	~1 inch			
5173 / 1 / A / Office area ambient air without filter		12:30	0.0	20.7	0.1	0.0	0					
5173 / 1 / A / Office area with filter		13:48	1.0	18.1	2.7	0.0	0					
5173 / 1 / A / Office area without filter		13:48	1.0	17.9	3.1	0.0	0					
5173 / 1 / B / Firing Range ambient air with filter		12:33	0.0	20.7	0.1	0.0	0					
5173 / 1 / B / Firing Range ambient air without filter		12:33	0.0	20.7	0.0	0.0	0					
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation										
5173 / 1 / Storage area ambient air, with filter		12:31	0.0	20.7	0.0	0.0	0					
5173 / 1 / Storage area ambient air, without filter		12:31	0.0	20.7	0.0	0.0	0					
5173 / 1 / C / Storage area with filter		13:59	120.3	1.8	6.5	0.8	15					
5173 / 1 / C / Storage area without filter		13:59	120.3	1.5	6.6	1.1	22					
5173 / 1 / A / Office area ambient air with filter		5/21/2013	14:06	0.0	20.5	0.0	0.0				0	40s - 80s
5173 / 1 / A / Office area ambient air without filter	14:06		0.0	20.5	0.0	0.0	0					
5173 / 1 / A / Office area with filter	15:37		0.0	18.8	1.8	0.0	0					
5173 / 1 / A / Office area without filter	15:37		0.0	18.7	2.5	0.0	0					
5173 / 1 / B / Firing Range ambient air with filter	13:50		0.0	19.2	0.0	0.0	0					
5173 / 1 / B / Firing Range ambient air without filter	13:50		0.0	19.3	0.0	0.0	0					
5173 / 1 / B / Firing Range with filter	15:41		0.9	6.7	12.1	0.0	0					
5173 / 1 / B / Firing Range without filter	15:41		0.9	6.8	12.6	0.0	0					
5173 / 1 / Storage area ambient air, with filter	13:58		0.0	20.0	0.0	0.0	0					
5173 / 1 / Storage area ambient air, without filter	13:58		0.0	20.0	0.0	0.0	0					
5173 / 1 / C / Storage area with filter	15:44		79.5	3.1	7.0	0.6	13					
5173 / 1 / C / Storage area without filter	15:44		79.5	3.1	6.6	1.0	20					
5173 / 1 / A / Office area ambient air with filter	5/30/2013	12:20	0.0	20.7	0.0	0.0	0	50s - 80s	~1.3 inch			
5173 / 1 / A / Office area ambient air without filter		12:20	0.0	20.7	0.0	0.0	0					
5173 / 1 / A / Office area with filter		13:48	1.7	18.6	2.0	0.0	0					
5173 / 1 / A / Office area without filter		13:48	1.7	18.4	2.3	0.0	0					
5173 / 1 / B / Firing Range ambient air with filter		12:34	0.0	20.8	0.0	0.0	0					
5173 / 1 / B / Firing Range ambient air without filter		12:34	0.0	20.7	0.0	0.0	0					
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation										
5173 / 1 / Storage area ambient air, with filter		12:36	0.0	20.7	0.0	0.0	0					
5173 / 1 / Storage area ambient air, without filter		12:36	0.0	20.7	0.0	0.0	0					
5173 / 1 / C / Storage area with filter		13:56	137.2	1.5	7.2	0.8	17					
5173 / 1 / C / Storage area without filter		13:56	137.2	1.6	7.4	1.2	25					

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	6/6/2013	13:51	0.1	20.9	0.0	0.0	60s	0.25 inch		
5173 / 1 / A / Office area ambient air without filter		13:51	0.1	20.9	0.1	0.0				
5173 / 1 / A / Office area with filter		15:28	1.8	19.2	2.0	0.0				
5173 / 1 / A / Office area without filter		15:28	1.8	19.0	2.2	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:56	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:56	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:55	0.0	20.9	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:55	0.0	20.9	0.0	0.0				
5173 / 1 / C / Storage area with filter		15:35	126.8	4.3	6.5	0.8				
5173 / 1 / C / Storage area without filter		15:35	126.8	4.4	6.8	1.1				
5173 / 1 / A / Office area ambient air with filter	6/13/2013	15:25	0.0	20.8	0.0	0.0	60s - 80s	1.55 inches		
5173 / 1 / A / Office area ambient air without filter		15:25	0.0	20.8	0.0	0.0				
5173 / 1 / A / Office area with filter		--	0.0	18.6	2.5	0.0				
5173 / 1 / A / Office area without filter		--	0.0	19.9	0.4	0.0				
5173 / 1 / B / Firing Range ambient air with filter		15:00	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		15:00	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range with filter		--	0.7	6.6	12.1	0.0				
5173 / 1 / B / Firing Range without filter		--	0.7	6.6	12.7	0.0				
5173 / 1 / Storage area ambient air, with filter		15:13	0.0	20.8	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		15:13	0.0	20.8	0.0	0.0				
5173 / 1 / C / Storage area with filter		--	86.4	2.0	7.5	1.0				
5173 / 1 / C / Storage area without filter	--	86.4	1.9	7.6	1.4					
5173 / 1 / A / Office area ambient air with filter	6/20/2013	--	0.0	21.0	0.0	0.0	50s - 80s	None		
5173 / 1 / A / Office area ambient air without filter		--	0.0	21.0	0.0	0.0				
5173 / 1 / A / Office area with filter		--	0.9	19.4	0.7	0.0				
5173 / 1 / A / Office area without filter		--	0.9	19.2	1.7	0.0				
5173 / 1 / B / Firing Range ambient air with filter		--	0.0	21.0	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		--	0.0	21.0	0.0	0.0				
5173 / 1 / B / Firing Range with filter		--	2.3	6.4	11.8	0.0				
5173 / 1 / B / Firing Range without filter		--	2.3	6.5	12.5	0.0				
5173 / 1 / Storage area ambient air, with filter		--	0.0	20.9	0.1	0.0				
5173 / 1 / Storage area ambient air, without filter		--	0.0	20.9	0.1	0.0				
5173 / 1 / C / Storage area with filter		--	235.1	2.5	7.6	1.0				
5173 / 1 / C / Storage area without filter	--	235.1	2.4	7.4	1.8					
5173 / 1 / A / Office area ambient air with filter	6/27/2013	13:12	0.0	21.6	0.0	0.0	70s - 80s	Trace		
5173 / 1 / A / Office area ambient air without filter		13:12	21.5	0.0	0.0	0.0				
5173 / 1 / A / Office area with filter		14:23	0.2	19.8	0.7	0.0				
5173 / 1 / A / Office area without filter		14:23	0.2	19.6	1.1	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:02	0.0	21.5	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:02	0.0	21.5	0.0	0.0				
5173 / 1 / B / Firing Range with filter		14:18	0.0	8.6	11.2	0.0				
5173 / 1 / B / Firing Range without filter		14:18	0.0	8.3	11.4	0.0				
5173 / 1 / Storage area ambient air, with filter		13:25	0.0	21.7	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:25	0.0	21.7	0.0	0.0				
5173 / 1 / C / Storage area with filter		14:30	223.0	3.1	5.7	1.3				
5173 / 1 / C / Storage area without filter	14:30	223.0	3.0	7.6	1.6					
5173 / 1 / A / Office area ambient air with filter	7/3/2013	12:51	0.0	20.7	0.0	0.0	60s - 80s	Trace		
5173 / 1 / A / Office area ambient air without filter		12:51	0.0	20.7	0.0	0.0				
5173 / 1 / A / Office area with filter		13:09	0.0	19.0	1.8	0.0				
5173 / 1 / A / Office area without filter		13:09	0.0	19.0	1.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		12:47	0.0	20.7	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		12:47	0.0	20.7	0.1	0.0				
5173 / 1 / B / Firing Range with filter		13:05	5.0	7.7	10.9	0.0				
5173 / 1 / B / Firing Range without filter		13:05	5.0	7.7	11.7	0.0				
5173 / 1 / Storage area ambient air, with filter		12:49	0	20.8	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		12:49	0	20.8	0.0	0.0				
5173 / 1 / C / Storage area with filter		13:25	217	3.3	6.5	1.2				
5173 / 1 / C / Storage area without filter	13:25	217	3.0	7.4	1.6					
5173 / 1 / A / Office area ambient air with filter	7/11/2013	13:34	0.0	20.7	0.0	0.0	60s - 70s	None		
5173 / 1 / A / Office area ambient air without filter		13:34	0.0	20.7	0.0	0.0				
5173 / 1 / A / Office area with filter		15:20	2.4	19.3	1.7	0.0				
5173 / 1 / A / Office area without filter		15:20	2.4	19.2	1.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:30	0.0	20.8	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:30	0.0	20.8	0.0	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:32	0.0	20.8	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:32	0.0	20.8	0.1	0.0				
5173 / 1 / C / Storage area with filter		15:25	102.6	1.7	7.8	1.2				
5173 / 1 / C / Storage area without filter		15:25	102.6	1.9	8.0	1.8				

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	7/18/2013	12:34	0.0	20.7	0.0	0.0	70s - 90s	None		
5173 / 1 / A / Office area ambient air without filter		12:34	0.0	20.8	0.0	0.0				
5173 / 1 / A / Office area with filter		15:16	1.9	19.7	1.5	0.0				
5173 / 1 / A / Office area without filter		15:16	1.9	19.8	1.3	0.0				
5173 / 1 / B / Firing Range ambient air with filter		12:30	0.0	20.7	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		12:30	0.0	20.7	0.0	0.0				
5173 / 1 / B / Firing Range with filter		15:09	5.0	8.0	11.0	0.0				
5173 / 1 / B / Firing Range without filter		15:09	5.0	7.7	11.9	0.0				
5173 / 1 / Storage area ambient air, with filter		12:32	0	20.7	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		12:32	0	20.7	0.0	0.0				
5173 / 1 / C / Storage area with filter		15:45	126.3	2.0	8.0	1.3				
5173 / 1 / C / Storage area without filter		15:45	126.3	2.9	8.0	1.9				
5173 / 1 / A / Office area ambient air with filter	7/25/2013	13:18	0.0	20.9	0.0	0.0	50s - 70s	None		
5173 / 1 / A / Office area ambient air without filter		13:18	0.0	20.9	0.0	0.0				
5173 / 1 / A / Office area with filter		14:46	2.4	19.6	1.6	0.0				
5173 / 1 / A / Office area without filter		14:46	2.4	19.6	1.4	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:15	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:15	0.0	20.9	0.1	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:16	0	21.0	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:16	0	21.0	0.1	0.0				
5173 / 1 / C / Storage area with filter		14:51	113.6	2.7	7.4	1.5				
5173 / 1 / C / Storage area without filter		14:51	113.6	2.8	7.7	1.9				
5173 / 1 / A / Office area ambient air with filter		8/1/2013	13:34	0.0	20.8	0.1				0.0
5173 / 1 / A / Office area ambient air without filter	13:34		0.0	20.8	0.0	0.0				
5173 / 1 / A / Office area with filter	14:41		1.0	18.9	2.5	0.0				
5173 / 1 / A / Office area without filter	14:41		1.0	19.0	1.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter	13:31		0.0	20.8	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter	13:31		0.0	20.8	0.0	0.0				
5173 / 1 / B / Firing Range with filter	14:35		0.9	7.4	11.3	0.0				
5173 / 1 / B / Firing Range without filter	14:35		0.9	7.5	11.5	0.0				
5173 / 1 / Storage area ambient air, with filter	13:32		0	20.8	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter	13:32		0	20.7	0.0	0.0				
5173 / 1 / C / Storage area with filter	14:46		173.9	2.1	6.7	1.5				
5173 / 1 / C / Storage area without filter	14:46		173.9	2.5	7.4	2.1				
5173 / 1 / A / Office area ambient air with filter	8/6/2013	13:08	0.0	20.6	0.0	0.0	60s - 80s	None		
5173 / 1 / A / Office area ambient air without filter		13:08	0.0	20.6	0.0	0.0				
5173 / 1 / A / Office area with filter		14:15	1.5	18.7	2.0	0.0				
5173 / 1 / A / Office area without filter		14:15	1.5	18.6	1.6	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:04	0.0	20.6	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:04	0.0	20.7	0.0	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:06	0	20.6	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:06	0	20.6	0.0	0.0				
5173 / 1 / C / Storage area with filter		14:21	151.3	2.6	7.0	1.5				
5173 / 1 / C / Storage area without filter		14:21	151.3	3.0	7.0	2.2				
5173 / 1 / A / Office area ambient air with filter		8/15/2013	12:52	0.0	20.8	0.0				0.0
5173 / 1 / A / Office area ambient air without filter	12:52		0.0	20.8	0.0	0.0				
5173 / 1 / A / Office area with filter	13:51		0.3	19.3	2.2	0.0				
5173 / 1 / A / Office area without filter	13:51		0.3	19.2	1.4	0.0				
5173 / 1 / B / Firing Range ambient air with filter	12:50		0.0	20.8	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter	12:50		0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range with filter	13:45		1.8	6.4	11.4	0.0				
5173 / 1 / B / Firing Range without filter	13:45		1.8	6.6	11.7	0.0				
5173 / 1 / Storage area ambient air, with filter	12:54		0	20.8	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter	12:54		0	20.8	0.0	0.0				
5173 / 1 / C / Storage area with filter	13:57		85.8	2.3	6.6	1.5				
5173 / 1 / C / Storage area without filter	13:57		85.8	2.8	6.7	2.0				
5173 / 1 / A / Office area ambient air with filter	8/22/2013	13:43	0.0	20.4	0.0	0.0	60s - 80s	Trace (0.06 in.)		
5173 / 1 / A / Office area ambient air without filter		13:43	0.0	20.4	0.0	0.0				
5173 / 1 / A / Office area with filter		14:53	0.0	18.9	1.4	0.0				
5173 / 1 / A / Office area without filter		14:53	0.0	18.9	1.4	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:40	0.0	20.4	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:40	0.0	20.4	0.0	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:41	0	20.3	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:41	0	20.3	0.1	0.0				
5173 / 1 / C / Storage area with filter		15:00	91.2	1.6	7.0	1.4				
5173 / 1 / C / Storage area without filter		15:00	91.2	1.8	7.0	2.2				

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	8/27/2013	13:28	0.0	20.5	0.0	0.0	70s - 80s	None		
5173 / 1 / A / Office area ambient air without filter		13:28	0.0	20.5	0.0	0.0				
5173 / 1 / A / Office area with filter		14:30	1.9	19.2	1.6	0.0				
5173 / 1 / A / Office area without filter		14:30	1.9	19.1	1.2	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:25	0.0	20.5	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:25	0.0	20.5	0.0	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:27	0.1	20.4	0.1	0.0				
5173 / 1 / Storage area ambient air, without filter		13:27	0.1	20.4	0.0	0.0				
5173 / 1 / C / Storage area with filter		14:35	91.4	3.1	8.4	1.5				
5173 / 1 / C / Storage area without filter		14:35	91.4	2.0	7.0	2.6				
5173 / 1 / A / Office area ambient air with filter	9/5/2013	15:09	-	21.0	0.0	0.0	50s - 80s	None		
5173 / 1 / A / Office area ambient air without filter		15:09	-	21.1	0.0	0.0				
5173 / 1 / A / Office area with filter		15:32	1.0	19.2	1.1	0.0				
5173 / 1 / A / Office area without filter		15:32	1.0	19.1	1.2	0.0				
5173 / 1 / B / Firing Range ambient air with filter		15:00	-	20.2	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		15:00	-	20.3	0.0	0.0				
5173 / 1 / B / Firing Range with filter		15:40	1.5	8.4	11.2	0.0				
5173 / 1 / B / Firing Range without filter		15:40	1.5	8.6	11.6	0.0				
5173 / 1 / Storage area ambient air, with filter		15:16	-	20.7	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		15:16	0	2.8	0.0	0.0				
5173 / 1 / C / Storage area with filter		15:46	85	2.3	8.9	1.6				
5173 / 1 / C / Storage area without filter		15:46	85	2.3	6.8	2.2				
5173 / 1 / A / Office area ambient air with filter	9/12/2013	14:42	0.0	21.0	0.0	0.0	60s-80s	0.29 inches		
5173 / 1 / A / Office area ambient air without filter		14:42	0.0	21.0	0.0	0.0				
5173 / 1 / A / Office area with filter		17:35	0.3	20.0	0.7	0.0				
5173 / 1 / A / Office area without filter		17:35	0.3	19.9	1.0	0.0				
5173 / 1 / B / Firing Range ambient air with filter		14:55	0.0	21.1	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		14:55	0.0	21.1	0.0	0.0				
5173 / 1 / B / Firing Range with filter		17:40	0.0	6.8	11.4	0.0				
5173 / 1 / B / Firing Range without filter		17:40	0.0	6.8	11.7	0.0				
5173 / 1 / Storage area ambient air, with filter		15:04	0	20.8	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		15:04	0	20.8	0.0	0.0				
5173 / 1 / C / Storage area with filter		17:43	83.4	2.4	7.0	1.7				
5173 / 1 / C / Storage area without filter		17:43	83.4	2.4	6.9	2.3				
5173 / 1 / A / Office area ambient air with filter	9/20/2013	13:28	0.0	20.7	0.0	0.0	60s - 80s	0.6 inches	1009 - 1013	
5173 / 1 / A / Office area ambient air without filter		13:28	0.0	20.7	0.0	0.0				
5173 / 1 / A / Office area with filter		14:20	0.4	18.7	1.0	0.0				
5173 / 1 / A / Office area without filter		14:20	0.4	18.6	1.2	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:36	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:36	0.0	20.9	0.0	0.0				
5173 / 1 / B / Firing Range with filter		14:24	1.2	8.5	10.6	0.0				
5173 / 1 / B / Firing Range without filter		14:24	1.2	8.5	10.9	0.0				
5173 / 1 / Storage area ambient air, with filter		13:44	0.2	20.9	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:44	0.2	20.9	0.0	0.0				
5173 / 1 / C / Storage area with filter		14:29	88.9	2.0	8.3	1.4				
5173 / 1 / C / Storage area without filter		14:29	88.9	2.1	6.1	1.9				
5173 / 1 / A / Office area ambient air with filter	9/24/2013	13:43	0.0	20.8	0.0	0.0	40s - 70s	None	1016 - 1018	
5173 / 1 / A / Office area ambient air without filter		13:43	0.0	20.9	0.0	0.0				
5173 / 1 / A / Office area with filter		14:44	0.3	18.1	1.4	0.0				
5173 / 1 / A / Office area without filter		14:44	0.3	18.0	1.5	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:40	0.0	20.8	0.1	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:40	0.0	20.8	0.0	0.0				
5173 / 1 / B / Firing Range with filter		14:38	1.2	6.7	10.0	0.0				
5173 / 1 / B / Firing Range without filter		14:38	1.2	6.7	10.6	0.0				
5173 / 1 / Storage area ambient air, with filter		13:41	0	20.8	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:41	0	20.8	0.1	0.0				
5173 / 1 / C / Storage area with filter		14:49	113.7	2.0	5.7	1.6				
5173 / 1 / C / Storage area without filter		14:49	113.7	2.0	5.9	2.1				
5173 / 1 / A / Office area ambient air with filter	10/3/2013	13:03	0.0	20.8	0.0	0.0	60s - 70s	0.27 inches	1015 - 1022	
5173 / 1 / A / Office area ambient air without filter		13:03	0.0	20.8	0.0	0.0				
5173 / 1 / A / Office area with filter		13:39	0.0	17.9	2.5	0.0				
5173 / 1 / A / Office area without filter		13:39	0.0	17.9	1.6	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:18	0	20.9	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:18	0	21.0	0.0	0.0				
5173 / 1 / C / Storage area with filter		13:41	121.1	1.7	5.2	1.5				
5173 / 1 / C / Storage area without filter		13:41	121.1	1.8	5.9	2.0				

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	Time	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)				
5173 / 1 / A / Office area ambient air with filter	10/10/2013	13:26	0.0	20.8	0.0	0.0	0	40s - 70s	None	1020 - 1022				
5173 / 1 / A / Office area ambient air without filter		13:26	0.0	20.9	0.0	0.0	0							
5173 / 1 / A / Office area with filter		13:56	0.6	16.2	1.5	0.0	0							
5173 / 1 / A / Office area without filter		13:56	0.6	16.2	1.8	0.0	0							
5173 / 1 / B / Firing Range ambient air with filter		13:03	0.0	20.8	0.0	0.0	0							
5173 / 1 / B / Firing Range ambient air without filter		13:03	0.0	20.8	0.0	0.0	0							
5173 / 1 / B / Firing Range with filter		14:01	1.3	6.0	9.7	0.0	0							
5173 / 1 / B / Firing Range without filter		14:01	1.3	5.8	10.4	0.0	0							
5173 / 1 / Storage area ambient air, with filter		13:13	0.05	20.6	0.0	0.0	0							
5173 / 1 / Storage area ambient air, without filter		13:13	0.05	20.6	0.0	0.0	0							
5173 / 1 / C / Storage area with filter		14:12	91.55	2.4	5.6	1.4	28							
5173 / 1 / C / Storage area without filter		14:12	91.55	1.8	5.2	1.9	39							
5173 / 1 / A / Office area ambient air with filter	10/17/2013	13:14	0.0	20.7	0.1	0.0	0	40s - 50s	0.1 inches	1011 - 1014				
5173 / 1 / A / Office area ambient air without filter		13:14	0.0	20.7	0.1	0.0	0							
5173 / 1 / A / Office area with filter		14:53	0.5	16.4	2.5	0.0	0							
5173 / 1 / A / Office area without filter		14:53	0.5	16.3	2.2	0.0	0							
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation												
5173 / 1 / Storage area ambient air, with filter		13:20	0	20.8	0.1	0.0	0							
5173 / 1 / Storage area ambient air, without filter		13:20	0	20.8	0.0	0.0	0							
5173 / 1 / C / Storage area with filter		14:58	138.6	2.4	4.9	1.4	28							
5173 / 1 / C / Storage area without filter		14:58	138.6	2.2	5.2	1.9	38							
5173 / 1 / A / Office area ambient air with filter		10/24/2013	12:26	0.0	21.0	0.1	0.0				0	30s - 40s	Trace (0.02 inches)	1015 - 1025
5173 / 1 / A / Office area ambient air without filter			12:26	0.0	20.9	0.0	0.0				0			
5173 / 1 / A / Office area with filter			13:50	3.6	16.2	1.3	0.0				0			
5173 / 1 / A / Office area without filter	13:50		3.6	16.0	2.6	0.0	0							
5173 / 1 / B / Firing Range	Inaccessible due to Firing Range operation													
5173 / 1 / Storage area ambient air, with filter	12:43		0	21.2	0.0	0.0	0							
5173 / 1 / Storage area ambient air, without filter	12:43		0	21.4	0.0	0.0	0							
5173 / 1 / C / Storage area with filter	13:54		223	4.3	2.5	1.0	20							
5173 / 1 / C / Storage area without filter	13:54		223	4.9	4.2	1.3	25							
5173 / 1 / A / Office area ambient air with filter	10/31/2013		13:36	0.0	21.1	0.1	0.0	0	60s	1.25 inches	1000 - 1010			
5173 / 1 / A / Office area ambient air without filter			13:36	0.0	21.1	0.1	0.0	0						
5173 / 1 / A / Office area with filter			15:17	1.5	16.6	3.0	0.0	0						
5173 / 1 / A / Office area without filter		15:17	1.5	16.8	2.0	0.0	0							
5173 / 1 / B / Firing Range ambient air with filter		13:13	0.0	21.1	0.0	0.0	0							
5173 / 1 / B / Firing Range ambient air without filter		13:13	0.0	21.0	0.0	0.0	0							
5173 / 1 / B / Firing Range with filter		15:21	1.9	10.3	6.6	0.0	0							
5173 / 1 / B / Firing Range without filter		15:21	1.9	10.3	7.0	0.0	0							
5173 / 1 / Storage area ambient air, with filter		13:26	0.3	21.1	0.0	0.0	0							
5173 / 1 / Storage area ambient air, without filter		13:26	0.3	21.0	0.0	0.0	0							
5173 / 1 / C / Storage area with filter		15:26	103.3	7.4	3.7	0.7	14							
5173 / 1 / C / Storage area without filter		15:26	103.3	7.4	3.2	1.0	19							
5173 / 1 / A / Office area ambient air with filter	11/7/2013	12:48	0.0	20.9	0.1	0.0	0	40s	Trace (0.04 inches)	1020 - 1025				
5173 / 1 / A / Office area ambient air without filter		12:48	0.0	21.0	0.1	0.0	0							
5173 / 1 / A / Office area with filter		14:04	1.5	15.3	3.4	0.0	0							
5173 / 1 / A / Office area without filter		14:04	1.5	15.2	3.4	0.0	0							
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation												
5173 / 1 / Storage area ambient air, with filter		12:51	0	21.0	0.0	0.0	0							
5173 / 1 / Storage area ambient air, without filter		12:51	0	21.0	0.0	0.0	0							
5173 / 1 / C / Storage area with filter		14:09	112.3	3.0	3.7	1.0	20							
5173 / 1 / C / Storage area without filter		14:09	112.3	3.0	4.2	1.3	26							
5173 / 1 / A / Office area ambient air with filter		11/12/2013	12:48	0.0	21.1	0.0	0.0				0	20s - 30s	Trace (0.05 inches)	1030 - 1036
5173 / 1 / A / Office area ambient air without filter			12:48	0.0	21.1	0.0	0.0				0			
5173 / 1 / A / Office area with filter			13:45	1.2	15.3	3.3	0.0				0			
5173 / 1 / A / Office area without filter	13:45		1.2	15.2	3.1	0.0	0							
5173 / 1 / B / Firing Range	Inaccessible due to Firing Range operation													
5173 / 1 / Storage area ambient air, with filter	12:44		0.0	21.2	0.0	0.0	0							
5173 / 1 / Storage area ambient air, without filter	12:44		0.0	21.3	0.0	0.0	0							
5173 / 1 / C / Storage area with filter	13:52		105.9	3.1	3.4	1.0	20							
5173 / 1 / C / Storage area without filter	13:52		105.9	2.9	3.9	1.3	26							

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)
5173 / 1 / A / Office area ambient air with filter	11/20/2013	14:31	0.0	21.2	0.0	0.0	20s - 40s	None	1023 - 1026
5173 / 1 / A / Office area ambient air without filter		14:31	0.0	21.2	0.0	0.0			
5173 / 1 / A / Office area with filter		14:45	0.0	15.5	3.0	0.0			
5173 / 1 / A / Office area without filter		14:45	0.0	15.2	3.4	0.0			
5173 / 1 / B / Firing Range ambient air with filter		14:42	0.0	21.2	0.0	0.0			
5173 / 1 / B / Firing Range ambient air without filter		14:42	0.0	21.2	0.0	0.0			
5173 / 1 / B / Firing Range with filter		14:47	0.0	6.7	8.1	0.0			
5173 / 1 / B / Firing Range without filter		14:47	0.0	6.4	9.3	0.0			
5173 / 1 / Storage area ambient air, with filter		14:35	0.0	21.1	0.1	0.0			
5173 / 1 / Storage area ambient air, without filter		14:35	0.0	21.1	0.0	0.0			
5173 / 1 / C / Storage area with filter		14:49	133.9	3.2	4.3	0.9			
5173 / 1 / C / Storage area without filter		14:49	133.9	2.8	3.7	1.3			
5173 / 1 / A / Office area ambient air with filter	11/26/2013	14:10	0.0	21.1	0.0	0.0	30s	Trace (0.01 inches)	1013 - 1019
5173 / 1 / A / Office area ambient air without filter		14:10	0.0	21.1	0.0	0.0			
5173 / 1 / A / Office area with filter		14:45	0.0	14.6	4.7	0.0			
5173 / 1 / A / Office area without filter		14:45	0.0	14.8	3.8	0.0			
5173 / 1 / B / Firing Range ambient air with filter		14:15	0.0	20.9	0.1	0.0			
5173 / 1 / B / Firing Range ambient air without filter		14:15	0.0	21.0	0.1	0.0			
5173 / 1 / B / Firing Range with filter		14:51	0.0	6.5	8.8	0.0			
5173 / 1 / B / Firing Range without filter		14:51	0.0	6.6	9.1	0.0			
5173 / 1 / Storage area ambient air, with filter		13:56	0.0	21.1	0.0	0.0			
5173 / 1 / Storage area ambient air, without filter		13:56	0.0	21.2	0.0	0.0			
5173 / 1 / C / Storage area with filter		14:57	90.7	2.3	4.2	1.0			
5173 / 1 / C / Storage area without filter		14:57	90.7	2.2	3.5	1.3			
5173 / 1 / A / Office area ambient air with filter	12/5/2013	13:33	0.1	21.8	0.0	0.0	30s - 40s	0.07 inches	1013 - 1016
5173 / 1 / A / Office area ambient air without filter		13:33	0.1	21.7	0.1	0.0			
5173 / 1 / A / Office area with filter		15:07	1.2	14.8	3.6	0.0			
5173 / 1 / A / Office area without filter		15:07	1.2	14.8	4.0	0.0			
5173 / 1 / B / Firing Range ambient air with filter		14:14	0.0	21.4	0.1	0.0			
5173 / 1 / B / Firing Range ambient air without filter		14:14	0.0	21.5	0.1	0.0			
5173 / 1 / B / Firing Range with filter		14:59	1.9	6.6	8.9	0.0			
5173 / 1 / B / Firing Range without filter		14:59	1.9	6.6	9.4	0.0			
5173 / 1 / Storage area ambient air, with filter		13:25	0.3	21.5	0.0	0.0			
5173 / 1 / Storage area ambient air, without filter		13:25	0.3	21.7	0.0	0.0			
5173 / 1 / C / Storage area with filter		15:11	189.7	2.8	3.5	0.9			
5173 / 1 / C / Storage area without filter		15:11	189.7	2.7	3.5	1.3			
5173 / 1 / A / Office area ambient air with filter	12/12/2013	13:59	0.0	21.0	0.1	0.0	15 - 20	None	1030 - 1036
5173 / 1 / A / Office area ambient air without filter		13:59	0.0	21.1	0.1	0.0			
5173 / 1 / A / Office area with filter		15:52	0.6	18.8	2.5	0.0			
5173 / 1 / A / Office area without filter		15:52	0.6	19.2	1.4	0.0			
5173 / 1 / B / Firing Range ambient air with filter		14:18	0.0	21.2	0.1	0.0			
5173 / 1 / B / Firing Range ambient air without filter		14:18	0.0	21.3	0.0	0.0			
5173 / 1 / B / Firing Range with filter		1.6	6.8	8.3	0.0	0			
5173 / 1 / B / Firing Range without filter		1.6	6.5	9.3	0.0	0			
5173 / 1 / Storage area ambient air, with filter		14:33	0.0	21.5	0.1	0.0			
5173 / 1 / Storage area ambient air, without filter		14:33	0.0	21.5	0.0	0.0			
5173 / 1 / C / Storage area with filter		15:57	96.2	8.8	2.9	0.3			
5173 / 1 / C / Storage area without filter		15:57	96.2	8.7	2.7	0.5			
5173 / 1 / A / Office area ambient air with filter	12/19/2013	14:36	0.0	21.6	0.0	0.0	30s - 40s	None	1016 - 1018
5173 / 1 / A / Office area ambient air without filter		14:36	0.0	21.5	0.1	0.0			
5173 / 1 / A / Office area with filter		15:00	0.6	20.8	0.5	0.0			
5173 / 1 / A / Office area without filter		15:00	0.6	20.7	0.6	0.0			
5173 / 1 / B / Firing Range ambient air with filter		14:39	0.0	21.6	0.0	0.0			
5173 / 1 / B / Firing Range ambient air without filter		14:39	0.0	21.6	0.0	0.0			
5173 / 1 / B / Firing Range with filter		15:05	0.0	9.0	7.8	0.0			
5173 / 1 / B / Firing Range without filter		15:05	0.0	9.1	8.3	0.0			
5173 / 1 / Storage area ambient air, with filter		14:23	0.0	21.3	0.0	0.0			
5173 / 1 / Storage area ambient air, without filter		14:23	0.0	21.3	0.0	0.0			
5173 / 1 / C / Storage area with filter		15:08	116.3	11.8	1.3	0.1			
5173 / 1 / C / Storage area without filter		15:08	116.3	11.7	1.8	0.2			



Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location:			PID	O <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	LEL	Ambient	Summary of Recent	Barometric	
Parcel / Building / Probe	Date:	Time	(ppm)	(%)	(%)	(%)	(%)	Temperature (°F)	Precipitation	Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	12/23/2013	12:46	0.0	21.5	0.0	0.0	0	20s - 30s	Trace (0.02 inches)	1026 - 1029	
5173 / 1 / A / Office area ambient air without filter		12:46	0.0	21.5	0.0	0.0	0				
5173 / 1 / A / Office area with filter		13:04	0.0	16.4	4.0	0.0	0				
5173 / 1 / A / Office area without filter		13:04	0.0	16.5	2.7	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		12:41	0.0	21.6	0.1	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		12:41	0.0	21.6	0.0	0.0	0				
5173 / 1 / B / Firing Range with filter		13:10	0.4	11.0	7.0	0.0	0				
5173 / 1 / B / Firing Range without filter		13:10	0.4	10.6	8.3	0.0	0				
5173 / 1 / Storage area ambient air, with filter		12:43	0.0	21.6	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		12:43	0.0	21.6	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		13:15	126.8	13.2	2.9	0.2	3				
5173 / 1 / C / Storage area without filter		13:15	126.8	13.4	1.8	0.2	4				
5173 / 1 / A / Office area ambient air with filter	1/2/2014	15:48	0.0	22.0	0.0	0.0	0	20 - 30	5.46 inches	1012 - 1026	
5173 / 1 / A / Office area ambient air without filter		15:48	0.0	22.0	0.1	0.0	0				
5173 / 1 / A / Office area with filter		16:25	0.8	21.2	0.2	0.0	0				
5173 / 1 / A / Office area without filter		16:25	0.8	21.1	0.4	0.0	0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter		15:42	0.0	21.5	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		15:42	0.0	21.7	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		16:28	86.4	15.0	0.5	0.0	0.1				
5173 / 1 / C / Storage area without filter		16:28	86.4	14.7	1.4	0.1	3				
5173 / 1 / A / Office area ambient air with filter	1/9/2014	13:35	0.0	21.2	0.0	0.0	0	20s - 30s	1.55 inches	1026 - 1035	
5173 / 1 / A / Office area ambient air without filter		13:35	0.0	21.3	0.1	0.0	0				
5173 / 1 / A / Office area with filter		14:56	3.3	20.7	1.8	0.0	0				
5173 / 1 / A / Office area without filter		14:56	3.3	21.0	0.2	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		13:31	0.0	21.2	0.0	0.0	0				
5173 / 1 / B / Firing Range ambient air without filter		13:31	0.0	21.2	0.0	0.0	0				
5173 / 1 / B / Firing Range with filter		Inaccessible due to Firing Range operation									
5173 / 1 / B / Firing Range without filter		Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter		13:33	0.0	21.1	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:33	0.0	21.2	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		15:00	81.4	10.2	0.8	0.1	3				
5173 / 1 / C / Storage area without filter		15:00	81.4	9.8	1.4	0.2	5				
5173 / 1 / A / Office area ambient air with filter	1/16/2014	12:34	0.0	21.1	0.0	0.0	0	20s - 30s	0.97 inches	1008 - 1019	
5173 / 1 / A / Office area ambient air without filter		12:34	0.0	21.0	0.0	0.0	0				
5173 / 1 / A / Office area with filter		13:13	2.1	21.0	0.4	0.0	0				
5173 / 1 / A / Office area without filter		13:13	2.1	20.9	0.1	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		12:36	0.0	20.9	0	0	0				
5173 / 1 / B / Firing Range ambient air without filter		12:36	0.0	20.9	0	0	0				
5173 / 1 / B / Firing Range with filter		Inaccessible due to Firing Range operation									
5173 / 1 / B / Firing Range without filter		Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter		12:37	0.0	20.9	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		12:37	0.0	20.9	0.1	0.0	0				
5173 / 1 / C / Storage area with filter		13:20	96.1	14.7	1.0	0.1	3				
5173 / 1 / C / Storage area without filter		13:20	96.1	14.6	1.5	0.2	4				
5173 / 1 / A / Office area ambient air with filter	1/23/2014	12:13	0.0	21.5	0.0	0.0	0	5 - 15	Trace	1019 - 1038	
5173 / 1 / A / Office area ambient air without filter		12:13	0.0	21.5	0.0	0.0	0				
5173 / 1 / A / Office area with filter		13:20	2.6	21.2	0.8	0.0	0				
5173 / 1 / A / Office area without filter		13:20	2.6	21.3	0.1	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		12:10	0.0	21.4	0.1	0	0				
5173 / 1 / B / Firing Range ambient air without filter		12:10	0.0	21.4	0	0	0				
5173 / 1 / B / Firing Range with filter		13:13	3.4	18.8	5.3	0.0	0				
5173 / 1 / B / Firing Range without filter		13:13	3.4	18.7	4.7	0.0	0				
5173 / 1 / Storage area ambient air, with filter		12:12	0.0	21.4	0.1	0.0	0				
5173 / 1 / Storage area ambient air, without filter		12:12	0.0	21.4	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		13:27	72.8	15.8	0.5	0.1	2				
5173 / 1 / C / Storage area without filter		13:27	72.8	15.7	1.2	0.2	4				
5173 / 1 / A / Office area ambient air with filter	1/28/2014	13:35	0.0	21.8	0.1	0.0	0	5	None	1030 - 1033	
5173 / 1 / A / Office area ambient air without filter		13:35	0.0	21.8	0.1	0.0	0				
5173 / 1 / A / Office area with filter		14:35	0.0	21.1	0.3	0.0	0				
5173 / 1 / A / Office area without filter		14:35	0.0	21.1	0.1	0.0	0				
5173 / 1 / B / Firing Range ambient air with filter		13:15	0.1	21.3	0	0	0				
5173 / 1 / B / Firing Range ambient air without filter		13:15	0.1	21.4	0	0	0				
5173 / 1 / B / Firing Range with filter		14:44	0.0	18.8	3.5	0.0	0				
5173 / 1 / B / Firing Range without filter		14:44	0.0	18.8	4.2	0.0	0				
5173 / 1 / Storage area ambient air, with filter		13:19	0.0	21.4	0.0	0.0	0				
5173 / 1 / Storage area ambient air, without filter		13:19	0.0	21.5	0.0	0.0	0				
5173 / 1 / C / Storage area with filter		14:50	60.9	15.5	0.7	0.1	1				
5173 / 1 / C / Storage area without filter		14:50	60.9	15.0	1.2	0.2	3				

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time	O <sub>2</sub> (ppm)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)				
5173 / 1 / A / Office area ambient air with filter	2/6/2014	13:10	0.0	21.1	0.1	0.0	15 - 25	0.3 inches	1029 - 1032				
5173 / 1 / A / Office area ambient air without filter		13:10	0.0	21.0	0.0	0.0							
5173 / 1 / A / Office area with filter		14:00	2.3	21.2	0.1	0.0							
5173 / 1 / A / Office area without filter		14:00	2.3	21.1	0.1	0.0							
5173 / 1 / B / Firing Range ambient air with filter		13:12	0.0	20.9	0.1	0							
5173 / 1 / B / Firing Range ambient air without filter		13:12	0.0	20.9	0	0							
5173 / 1 / B / Firing Range with filter		Inaccessible due to Firing Range operation											
5173 / 1 / B / Firing Range without filter		Inaccessible due to Firing Range operation											
5173 / 1 / Storage area ambient air, with filter		13:14	0.0	21.0	0.1	0.0							
5173 / 1 / Storage area ambient air, without filter		13:14	0.0	21.1	0.1	0.0							
5173 / 1 / C / Storage area with filter		14:10	105.9	16.9	1.0	0.1							
5173 / 1 / C / Storage area without filter		14:10	105.9	16.8	1.2	0.1							
5173 / 1 / A / Office area ambient air with filter	2/13/2014	13:48	0.0	21.2	0.0	0.0	25 - 35	None	1003 - 1018				
5173 / 1 / A / Office area ambient air without filter		13:48	0.0	21.3	0.1	0.0							
5173 / 1 / A / Office area with filter		15:30	1.8	20.9	2.4	0.0							
5173 / 1 / A / Office area without filter		15:30	1.8	21.2	0.0	0.0							
5173 / 1 / B / Firing Range ambient air with filter		13:40	0.0	21.1	0.1	0.0							
5173 / 1 / B / Firing Range ambient air without filter		13:40	0.0	21.3	0.0	0.0							
5173 / 1 / B / Firing Range with filter		15:25	4.1	19.2	2.5	0.0							
5173 / 1 / B / Firing Range without filter		15:25	4.1	19.1	3.1	0.0							
5173 / 1 / Storage area ambient air, with filter		9:43	0.0	21.0	0.0	0.0							
5173 / 1 / Storage area ambient air, without filter		9:43	0.0	21.0	0.0	0.0							
5173 / 1 / C / Storage area with filter		9:55	117.4	15.9	0.8	0.1							
5173 / 1 / C / Storage area without filter		9:55	117.4	15.8	1.2	0.1							
5173 / 1 / A / Office area ambient air with filter	2/20/2014	13:43	0.0	20.8	0.0	0.0	35 - 40	None	1010 - 1014				
5173 / 1 / A / Office area ambient air without filter		13:43	0.0	20.7	0.0	0.0							
5173 / 1 / A / Office area with filter		14:25	0.4	20.5	0.8	0.0							
5173 / 1 / A / Office area without filter		14:25	0.4	20.8	0.0	0.0							
5173 / 1 / B / Firing Range ambient air with filter		13:44	0.0	20.7	0.1	0.0							
5173 / 1 / B / Firing Range ambient air without filter		13:44	0.0	20.7	0.0	0.0							
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation											
5173 / 1 / Storage area ambient air, with filter		13:45	0.0	20.7	0.0	0.0							
5173 / 1 / Storage area ambient air, without filter		13:45	0.0	20.7	0.1	0.0							
5173 / 1 / C / Storage area with filter		14:32	63.4	16.5	1.0	0.0							
5173 / 1 / C / Storage area without filter		14:32	63.4	16.5	1.2	0.1							
5173 / 1 / A / Office area ambient air with filter		2/27/2014	12:56	0.0	21.2	0.0				0.0	15 - 25	Trace	1008 - 1024
5173 / 1 / A / Office area ambient air without filter	12:56		0.0	21.2	0.0	0.0							
5173 / 1 / A / Office area with filter	13:25		0.9	21.1	0.0	0.0							
5173 / 1 / A / Office area without filter	13:25		0.9	21.1	0.1	0.0							
5173 / 1 / B / Firing Range ambient air with filter	12:54		0.0	21.3	0.1	0.0							
5173 / 1 / B / Firing Range ambient air without filter	12:54		0.0	21.3	0.0	0.0							
5173 / 1 / B / Firing Range	Inaccessible due to Firing Range operation												
5173 / 1 / Storage area ambient air, with filter	12:52		0.0	21.2	0.0	0.0							
5173 / 1 / Storage area ambient air, without filter	12:52		0.0	21.3	0.1	0.0							
5173 / 1 / C / Storage area with filter	13:32		64.0	16.5	2.3	0.1							
5173 / 1 / C / Storage area without filter	13:32		64.0	16.6	1.1	0.2							
5173 / 1 / A / Office area ambient air with filter	3/6/2014		13:40	0.0	20.9	0.0	0.0	35 - 45	None	1020 - 1029			
5173 / 1 / A / Office area ambient air without filter		13:40	0.0	20.9	0.0	0.0							
5173 / 1 / A / Office area with filter		14:40	0.2	20.7	0.3	0.0							
5173 / 1 / A / Office area without filter		14:40	0.2	20.6	0.2	0.0							
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation											
5173 / 1 / Storage area ambient air, with filter		13:50	0.0	20.9	0.0	0.0							
5173 / 1 / Storage area ambient air, without filter		13:50	0.0	20.9	0.0	0.0							
5173 / 1 / C / Storage area with filter		15:00	57.1	16.0	1.2	0.1							
5173 / 1 / C / Storage area without filter		15:00	57.1	15.8	1.2	0.1							
5173 / 1 / A / Office area ambient air with filter		4/2/2014	12:44	0.0	21.4	0.1	0.0				50s	Trace (0.15 inches)	1020
5173 / 1 / A / Office area ambient air without filter			12:44	0.0	21.4	0.0	0.0						
5173 / 1 / A / Office area with filter			1.0	21.4	0.1	0.0							
5173 / 1 / A / Office area without filter	1.0		21.4	0.0	0.0								
5173 / 1 / B / Firing Range ambient air with filter	12:42		0.1	21.4	0.1	0.0							
5173 / 1 / B / Firing Range ambient air without filter	12:42		0.1	21.4	0.1	0.0							
5173 / 1 / B / Firing Range	Inaccessible due to Firing Range operation												
5173 / 1 / Storage area ambient air, with filter	12:40		0.1	21.3	0.2	0.0							
5173 / 1 / Storage area ambient air, without filter	12:40		0.1	21.3	0.1	0.0							
5173 / 1 / C / Storage area with filter	65.3		16.3	1.2	0.1								
5173 / 1 / C / Storage area without filter	65.3		16.4	1.0	0.1								

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time (ppm)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	5/8/2014 <sup>(b)</sup>	15:05	0.0	20.6	0.0	0.0	75-85	None	1013-1017	
5173 / 1 / A / Office area ambient air without filter		15:05	0.0	20.6	0.0	0.0				
5173 / 1 / A / Office area with filter		15:55	0.1	20.5	0.0	0.0				
5173 / 1 / A / Office area without filter		15:55	0.1	20.5	0.0	0.0				
5173 / 1 / B / Firing Range ambient air with filter		14:50	0.0	19.9	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		14:50	0.0	20.0	0.0	0.0				
5173 / 1 / B / Firing Range with filter		15:49	2.0	18.1	1.9	0.0				
5173 / 1 / B / Firing Range without filter		15:49	2.0	18.1	2.1	0.0				
5173 / 1 / Storage area ambient air, with filter		14:57	0.0	20.3	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		14:57	0.0	20.3	0.0	0.0				
5173 / 1 / C / Storage area with filter		15:58	51.1	18.2	0.8	0.0				
5173 / 1 / C / Storage area without filter		15:58	51.1	18.2	1.2	0.0				
5173 / 1 / A / Office area ambient air with filter	6/3/2014	12:17	0.0	20.8	0.0	0.0	75-85	Trace	1011-1014	
5173 / 1 / A / Office area ambient air without filter		12:17	0.0	20.8	0.0	0.0				
5173 / 1 / A / Office area with filter		12:32	0.3	21.0	0.0	0.0				
5173 / 1 / A / Office area without filter		12:32	0.3	21.1	0.0	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		12:43	0.1	21.1	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		12:43	0.1	21.1	0.0	0.0				
5173 / 1 / C / Storage area with filter		12:50	30.9	16.9	2.3	0.0				
5173 / 1 / C / Storage area without filter	12:50	30.9	16.8	2.5	0.1	2				
5173 / 1 / A / Office area ambient air with filter	7/17/2014	13:32	0.0	20.5	0.0	0.0	70-75	None	1016-1020	
5173 / 1 / A / Office area ambient air without filter		13:32	0.0	20.6	0.0	0.0				
5173 / 1 / A / Office area with filter		15:49	0.0	20.2	0.1	0.0				
5173 / 1 / A / Office area without filter		15:49	0.0	20.3	0.0	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:20	0.2	20.6	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:20	0.2	20.7	0.0	0.0				
5173 / 1 / B / Firing Range with filter		15:53	4.0	16.2	3.1	0.0				
5173 / 1 / B / Firing Range without filter		15:53	4.0	16.2	3.3	0.0				
5173 / 1 / Storage area ambient air, with filter		13:45	0.0	20.9	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:45	0.0	20.9	0.0	0.0				
5173 / 1 / C / Storage area with filter		16:19	43.2	15.8	2.5	0.0				
5173 / 1 / C / Storage area without filter		16:19	43.2	15.7	2.7	0.0				1
5173 / 1 / A / Office area ambient air with filter	8/14/2014	13:35	0.0	20.9	0.0	0.0	70-80	None	1014-1017	
5173 / 1 / A / Office area ambient air without filter		13:35	0.0	21.0	0.0	0.0				
5173 / 1 / A / Office area with filter		15:13	0.8	20.9	0.0	0.0				
5173 / 1 / A / Office area without filter		15:13	0.8	20.9	0.0	0.0				
5173 / 1 / B / Firing Range ambient air with filter		13:08	0.2	20.9	0.0	0.0				
5173 / 1 / B / Firing Range ambient air without filter		13:08	0.2	20.9	0.0	0.0				
5173 / 1 / B / Firing Range with filter		15:08	4.7	16.9	3.2	0.0				
5173 / 1 / B / Firing Range without filter		15:08	4.7	16.9	3.4	0.0				
5173 / 1 / Storage area ambient air, with filter		13:22	0.3	21.0	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:22	0.3	21.0	0.0	0.0				
5173 / 1 / C / Storage area with filter		15:18	51.9	16.6	2.8	0.0				
5173 / 1 / C / Storage area without filter		15:18	51.9	16.6	2.9	0.0				0
5173 / 1 / A / Office area ambient air with filter	10/9/2014		0.0	20.7	0.1	0.0	50s	0.3 inches	1017-1021	
5173 / 1 / A / Office area ambient air without filter			0.0	20.7	0.0	0.0				
5173 / 1 / A / Office area with filter		13:23	0.0	20.6	0.1	0.0				
5173 / 1 / A / Office area without filter		13:23	0.0	20.6	0.3	0.0				
5173 / 1 / B / Firing Range ambient air with filter			0.0	20.7	0.2	0.0				
5173 / 1 / B / Firing Range ambient air without filter			0.0	20.7	0.1	0.0				
5173 / 1 / B / Firing Range with filter		Inaccessible due to Firing Range operation								
5173 / 1 / B / Firing Range without filter										
5173 / 1 / Storage area ambient air, with filter			0.0	20.7	0.2	0.0				
5173 / 1 / Storage area ambient air, without filter			0.0	20.6	0.2	0.0				
5173 / 1 / C / Storage area with filter		13:29	60.4	18.3	1.5	0.0				
5173 / 1 / C / Storage area without filter		13:29	60.4	18.1	1.7	0.0				0
5173 / 1 / A / Office area ambient air with filter	11/26/2014	13:00	0.0	21.5	0.0	0.0	30-35	None	1018-1023	
5173 / 1 / A / Office area ambient air without filter		13:00	0.0	21.5	0.0	0.0				
5173 / 1 / A / Office area with filter		14:05	0.6	21.7	0.0	0.0				
5173 / 1 / A / Office area without filter		14:05	0.6	21.8	0.0	0.0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation								
5173 / 1 / Storage area ambient air, with filter		13:17	0.0	21.4	0.0	0.0				
5173 / 1 / Storage area ambient air, without filter		13:17	0.0	21.4	0.0	0.0				
5173 / 1 / C / Storage area with filter		14:10	23.2	21.1	0.2	0.0				
5173 / 1 / C / Storage area without filter		14:10	23.2	21.1	0.4	0.0				0

Table 2

Vapor Intrusion Sampling Values  
Parcel 5173 Building 15 - Sim Trainer  
2031 Dryden Road  
South Dayton Dump and Landfill Site  
Moraine, Ohio

Sample Location: Parcel / Building / Probe	Date:	PID Time	O <sub>2</sub> (ppm)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	LEL (%)	Ambient Temperature (°F)	Summary of Recent Precipitation	Barometric Pressure (hPa)	
5173 / 1 / A / Office area ambient air with filter	2/6/2015	14:05	0.0	21.4	0.0	0	25-35	None	1022 - 1030	
5173 / 1 / A / Office area ambient air without filter		14:05	0.0	21.4	0.0	0				
5173 / 1 / A / Office area with filter		0.0	21.2	1.8	0.0	0				
5173 / 1 / A / Office area without filter		0.0	21.1	2.1	0.0	0				
5173 / 1 / B / Firing Range		Inaccessible due to Firing Range operation / Gas probe damaged per site personnel notification								
5173 / 1 / Storage area ambient air, with filter		14:19	0.1	21.7	0.0	0				0
5173 / 1 / Storage area ambient air, without filter		14:19	0.1	21.7	0.0	0				0
5173 / 1 / C / Storage area with filter		16:33	11.7	20.5	0.5	0.1				3
5173 / 1 / C / Storage area without filter		16:33	11.7	20.6	0.5	0.1				3
5173 / 1 / A / Office area ambient air with filter		5/20/2015	14:43	0.0	20.8	0.0				0
5173 / 1 / A / Office area ambient air without filter	14:43		0.0	20.9	0.1	0	0			
5173 / 1 / A / Office area with filter	16:35		0.4	20.9	0.4	0	0			
5173 / 1 / A / Office area without filter	16:35		0.4	21.1	0.0	0	0			
5173 / 1 / B / Firing Range ambient air with filter	13:47		0.0	21.0	0.0	0	0			
5173 / 1 / B / Firing Range ambient air without filter	13:47		0.0	21.0	0.0	0	0			
5173 / 1 / B / Firing Range with filter	16:33		4.7	18.8	1.8	0	0			
5173 / 1 / B / Firing Range without filter	16:33		4.7	18.9	1.7	0	0			
5173 / 1 / Storage area ambient air, with filter	14:02		0.0	21.0	0.0	0	0			
5173 / 1 / Storage area ambient air, without filter	14:02		0.0	21.0	0.0	0	0			
5173 / 1 / C / Storage area with filter	16:54	12.3	18.8	0.8	0	0	65-70	Trace	1009 - 1017	
5173 / 1 / C / Storage area without filter	16:54	12.3	18.7	0.9	0	0				
5173 / 1 / A / Office area ambient air with filter	10:55	0.0	20.1	0.0	0	0				
5173 / 1 / A / Office area ambient air without filter	10:55	0.0	20.2	0.0	0	0				
5173 / 1 / A / Office area with filter	14:39	0.0	20.0	0.0	0	0				
5173 / 1 / A / Office area without filter	14:39	0.0	20.2	0.0	0	0				
5173 / 1 / B / Firing Range	Inaccessible due to Firing Range operation									
5173 / 1 / Storage area ambient air, with filter	10:36	0.9	20.2	0.0	0	0				
5173 / 1 / Storage area ambient air, without filter	10:36	0.9	20.1	0.0	0	0				
5173 / 1 / C / Storage area with filter	14:43	4.7	17.8	1.5	0	0				
5173 / 1 / C / Storage area without filter	14:43	4.7	17.7	1.7	0	0				
5173 / 1 / A / Office area ambient air with filter	11/5/2015	14:06	0.0	21.0	0.0	0	60-70	Trace	1019 - 1021	
5173 / 1 / A / Office area ambient air without filter		14:06	0.0	21.0	0.0	0				0
5173 / 1 / A / Office area with filter		14:57	0.7	20.8	0.3	0				0
5173 / 1 / A / Office area without filter		14:57	0.7	20.7	0.0	0				0
5173 / 1 / B / Firing Range ambient air with filter		13:43	0.0	20.8	0.0	0				0
5173 / 1 / B / Firing Range ambient air without filter		13:43	0.0	20.8	0.0	0				0
5173 / 1 / B / Firing Range with filter		15:05	2.8	19.7	0.4	0				0
5173 / 1 / B / Firing Range without filter		15:05	2.8	19.4	1.3	0				0
5173 / 1 / Storage area ambient air, with filter		13:48	0.0	20.8	0.0	0				0
5173 / 1 / Storage area ambient air, without filter		13:48	0.0	20.8	0.0	0				0
5173 / 1 / C / Storage area with filter	15:10	3.7	19.3	0.4	0	0	35-45	Trace	1005 - 1012	
5173 / 1 / C / Storage area without filter	15:10	3.7	19.1	0.9	0	0				
5173 / 1 / A / Office area ambient air with filter	14:04	0.0	21.7	0.1	0	0				
5173 / 1 / A / Office area ambient air without filter	14:04	0.0	21.7	0.1	0	0				
5173 / 1 / A / Office area with filter	14:31	1.0	21.7	0.2	0	0				
5173 / 1 / A / Office area without filter	14:31	1.0	21.7	0.1	0	0				
5173 / 1 / B / Firing Range ambient air with filter	13:45	0.0	21.8	0.0	0	0				
5173 / 1 / B / Firing Range ambient air without filter	13:45	0.0	21.9	0.0	0	0				
5173 / 1 / B / Firing Range with filter	14:27	2.6	21	0.3	0.2	0				
5173 / 1 / B / Firing Range without filter	14:27	2.6	20.9	0.9	0	0				
5173 / 1 / Storage area ambient air, with filter	13:52	0.0	21.7	0.0	0	0				
5173 / 1 / Storage area ambient air, without filter	13:52	0.0	21.7	0.0	0	0				
5173 / 1 / C / Storage area with filter	14:35	3.7	20.6	0.4	0	0				
5173 / 1 / C / Storage area without filter	14:35	3.7	20.5	0.5	0	0				

## Notes:

<sup>1</sup> - The explosive gas monitor baseline reading was 1 percent LEL. The meter did not zero for LEL readings and the corresponding methane readings were 0 percent; therefore, the readings of 1 percent are anomalous.

<sup>[2]</sup> - Combustible Gas measurements from SIM Trainer were not collected during the week of February 20th, due to range

<sup>[3]</sup> - CO<sub>2</sub> readings started at 0.1 ppm.

R - Value was rejected (R) as the LEL reading did not correspond to the methane reading of 0 percent.

PID - Photocionization Detector

O<sub>2</sub> - Oxygen

CO<sub>2</sub> - Carbon Dioxide

CH<sub>4</sub> - Methane

LEL - Lower Explosive Limit

U - Qualified as non-detect due to issues with the filter

Value - Value is greater than screening levels for rapid response (USEPA, 2010).

Source of weather data for July to September 2016.

[https://www.wunderground.com/history/airport/KDAY/2016/9/28/DailyHistory.html?req\\_city=&req\\_state=&req\\_state\\_name=&reqdb.zip=&reqdb.magic=&reqdb.wmo=](https://www.wunderground.com/history/airport/KDAY/2016/9/28/DailyHistory.html?req_city=&req_state=&req_state_name=&reqdb.zip=&reqdb.magic=&reqdb.wmo=)